Xerox DocuPrint 4850/4890 IPS Guide to Configuring and Managing the System

THE DOCUMENT COMPANY
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Laser safety

Warning: Adjustments, use of controls, or performance of procedures other than those specified herein may result in hazardous light exposure. ⚠

The Xerox DocuPrint printers are certified to comply with the performance standards of the U.S. Department of Health, Education, and Welfare for Class 1 laser products. Class 1 laser products do not emit hazardous radiation. The DocuPrint printers do not emit hazardous radiation because the laser beam is completely enclosed during all modes of customer operation.

The laser danger labels on the system are for Xerox service representatives and are on or near panels or shields that must be removed with a tool. **DO NOT REMOVE LABELED PANELS OR PANELS NEAR LABELS. ONLY XEROX SERVICE REPRESENTATIVES HAVE ACCESS TO THESE PANELS.**

Ozone information

This product produces ozone during normal operation. The amount of ozone produced depends on copy volume. Ozone is heavier than air. The environmental parameters specified in the Xerox installation instructions ensure that concentration levels are within safe limits. If you need additional information concerning ozone, call 1-800-828-6571 to request the Xerox publication 600P83222, *OZONE*.

Operation safety

Your Xerox equipment and supplies have been designed and tested to meet strict safety requirements. They have been approved by safety agencies, and they comply with environmental standards. Please observe the following precautions to ensure your continued safety.

- Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.

Warning: Improper connection of the equipment grounding conductor may result in risk of electrical shock. ⚠

- Never use a ground adapter plug to connect equipment to an electrical outlet that lacks a ground connection terminal.
- Always place equipment on a solid support surface with adequate strength for its weight.
- Always use materials and supplies specifically designed for your Xerox equipment. Use of unsuitable materials may result in poor performance and may create a hazardous situation.
- Never move either the printer or the Printer Controller without first contacting Xerox for approval.
- Never attempt any maintenance that is not specifically described in this documentation.
- Never remove any covers or guards that are fastened with screws. There are no operator-serviceable areas within these covers.
- Never override electrical or mechanical interlocks.
- Never use supplies or cleaning materials for other than their intended purposes. Keep all materials out of the reach of children.
- Never operate the equipment if you notice unusual noises or odors. Disconnect the power cord from the electrical outlet and call service to correct the problem.

If you need any additional safety information concerning the equipment or materials Xerox supplies, call Xerox Product Safety at the following toll-free number in the United States:

1-800-828-6571

For customers outside the United States contact your local Xerox representative or operating company.

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Introduction

This *Xerox DocuPrint 4850/4890 IPS Guide to Configuring and Managing the System* provides information on how to perform DocuPrint system administration tasks for the DocuPrint 4850 or 4890 IPS.

About this guide

This guide is intended for system administrators who are responsible for setting up and maintaining DocuPrint printers.

Users should have an understanding of Printer Controller operations and be familiar with SunOS and basic UNIX commands.

Some of the procedures described in this guide may be performed by the printer operator. For more information on printer operator tasks, refer to the other documents listed in the "Related publications" section.

Before using this guide, become familiar with its contents and conventions.

Contents

This section lists the contents of this guide:

- Chapter 1, “Introduction to the graphical user interface,” gives an overview of IPS windows and menus, and provides instructions on interacting with the screens.
- Chapter 2, “Starting and stopping the system,” describes how to power on and off the system, how to start and stop job processing, and how to stop and restart the system.
- Chapter 3, “Setting up the Printer Controller,” provides information on how to use the user interface to set up the Printer Controller to print your jobs.
- Chapter 4, “Setting the system configuration,” provides information on how to use the user interface to configure various features of your IPS, including input and output trays.

An index is provided at the back of the guide.

Conventions

This guide uses the following conventions:

- All caps and angle brackets — Within procedures, the names of keys are shown in all caps within angle brackets (for example, press <ENTER>).
- **Bold** — Within procedures, text and numbers that you enter are shown in bold (for example, enter **cmd tool**).
- "Enter" — Within procedures, the two-step process of keying in data and pressing <RETURN> (for example, enter y).
- *Italics* — Document and library names are shown in italics (for example, the *Xerox DocuPrint 4850/4890 IPS Guide to Configuring and Managing the System*).
- Capitalization of graphical user interface (GUI) window titles matches the titles as they appear on the screen. In cases where a window does not have a title, it is referenced using all lower case. For example:
  - — At the graphical user interface, use the Output Configuration window to group the trays.
  - — The main window displays the current system status.

Note: Notes are hints that help you perform a task or understand the text.

Caution: Cautions alert you to an action that could damage hardware or software.

Warning: Warnings alert you to conditions that could affect the safety of people.

Related publications

This document is part of the Xerox DocuPrint IPS publication set.

Xerox documents

Following is a list of all Xerox DocuPrint IPS documents. For a complete list and description of available Xerox documentation, refer to the *Xerox Customer Documentation Catalog* (publication number 610P17517), or call your service representative.

Application Programmer/System Administrator Quick Reference Card

Customer Information Quick Reference Card

Generic MICR Fundamentals Guide

Glossary

Guide to Configuring and Managing the System

Guide to Performing Routine Maintenance

Helpful Facts About Paper

Installation Planning Guide

Master Index

Messages Guide

Solutions Guide

System Overview Guide

Troubleshooting Guide

Xerox Standard Font Library Font User Guide

The documentation set also includes an electronic version, the *DocuPrint IPS Interactive Customer Documentation CD*.

IBM documents

Following are related IBM documents. Contact your local IBM representative for ordering instructions for IBM AFP/PSF manuals that might be useful for your specific installation.

IBM 3825 Page Printer Product Description

IBM Intelligent Printer Data Stream Reference

IBM Advanced Function Presentation Printer Summary

IBM ITSC Distributing AFP Printing from a Host System

IBM Advanced Function Printing Data Stream Reference

IBM Data Stream and Object Architectures: Mixed Object Document Content Architecture Reference

Guide to Advanced Function Presentation

1. Introduction to the graphical user interface

This chapter gives an overview of the graphical user interface (GUI) and provides instructions on how to use it to interact with the system.

With the user interface you perform operator and system administration tasks through a dynamic set of windows. Either a mouse or certain keyboard combinations are used to move between windows and select options. You enter commands through windows on the display screen.

The graphical user interface screen

After you power on the Host Channel Unit (HCU), if appropriate, and the Sun workstation, the Printer Controller monitor displays three windows:

- IPS main window
- IPS Console window
- IPS Print Engine Monitor window.

The **IPS main window** is the largest window on the screen. The main window displays the current system setup, the current system status, and any jobs that are running. This window also provides access to menus and subwindows from which you can configure and operate your system.

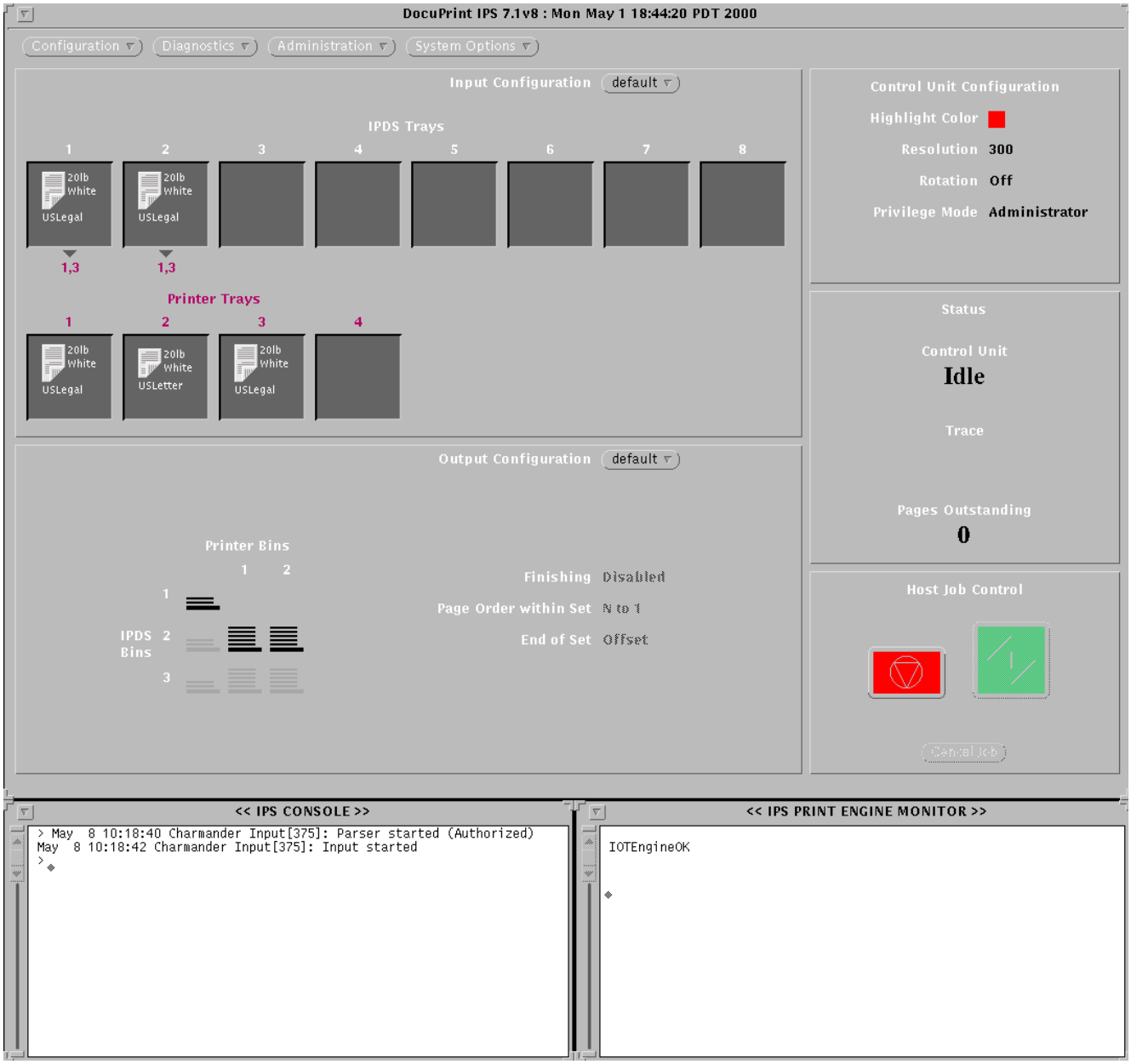
The **IPS Console window** displays messages that warn you of Printer Controller problems. The window also indicates the host job name as it is started and received by the system. This window initially displays below the IPS main window on the left, but it can be moved where desired.

Note: High frequency service indicator (HFSI) messages may appear occasionally in this window. These messages do not indicate any problem, merely that you should advise your service representative to check the indicated areas during the next service call.

The **IPS Print Engine Monitor window** shows printer error messages, indicates the printer status and displays printer and DFA messages. (This window initially displays below the IPS main window on the right, but it can be moved where desired.)

Figure 1-1 shows these windows on the screen of the Printer Controller monitor.

Figure 1-1. **Printer Controller monitor with IPS main window, IPS Console window, and IPS Print Engine Monitor window**



Using the user interface screens

The graphical user interface screens contain various combinations of pull-down menus and dropdown lists, selection buttons, incremental spin boxes, and text fields by which you can interact with the system. The following describes how to use these screen features.

Pull-down menus

A pull-down menu or list is indicated by an inverted triangle within the menu title box or oval, to the right of the menu name.

Figure 1-2. **Example of a pull-down menu title button from the IPS main window**

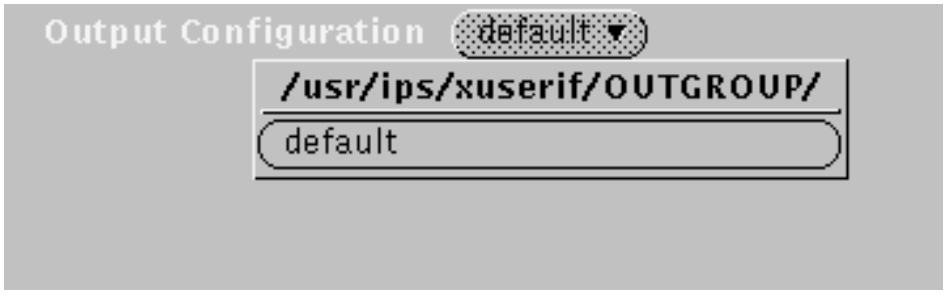
Types of pull-down menus

You will encounter two types of pull-down menus on the IPS windows:

- **File pull-down menus.** These menus contain options that are actually files. When you select an option, the system retrieves that file. The top line of a file pull-down menu displays the directory path the system takes to retrieve the file you select.

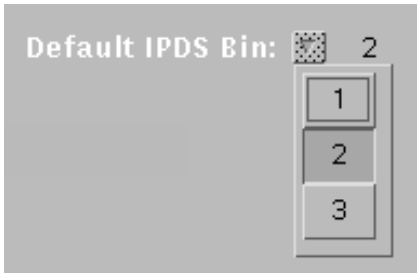
  Examples of this type of pull-down menu include Input and Output Group Name menus and DFA Profile menus.

Figure 1-3. **Example of a file pull-down menu**



- **Standard pull-down menus** display the options to be selected.

Figure 1-4. **Example of a standard pull-down menu**



Selecting from a pull-down menu

There are two methods of accessing items from a pull-down menu:

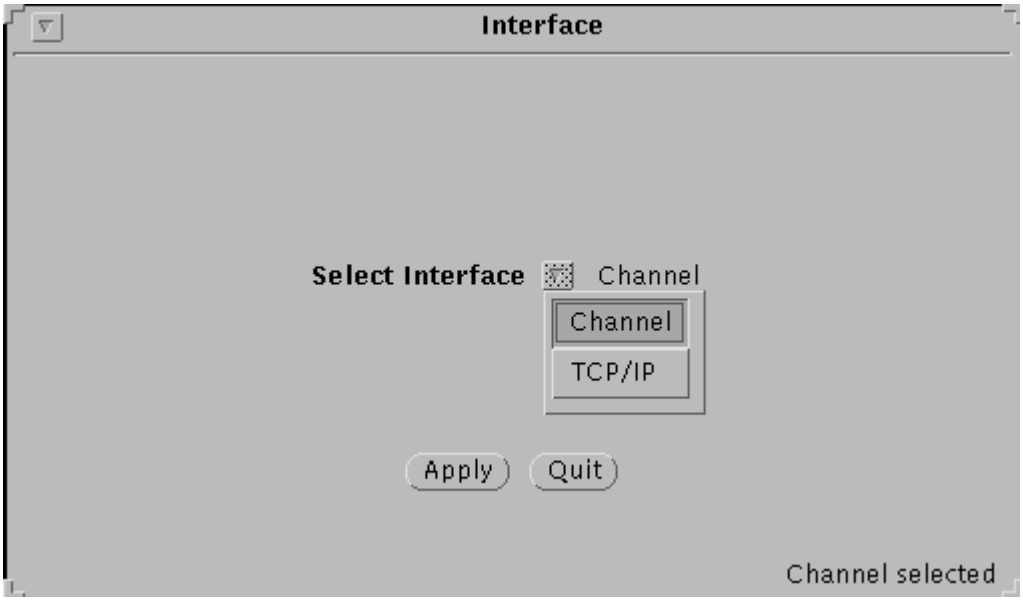
- **Click method:**
  1. Position the cursor over the menu box or oval and click the right mouse button. The menu options display.
  2. With either mouse button, click the option you want. The menu disappears and the screen for your selection is displayed.
- **Drag method:**
  1. Position the cursor over the menu box or oval and hold down the right mouse button. The menu options display.
  2. Continue to hold down the right mouse button while you drag the cursor to the option you want.
  3. Release the mouse button when the cursor is on your selection. The menu disappears and the screen for your selection is displayed.

Notes on pull-down menus

Here are a few things to remember about pull-down menus:

- Clicking a pull-down menu with the left mouse button selects the *first* option on the menu/list. (Clicking with the right button displays the entire menu.)
- Only one menu item window can be displayed at a time. Therefore, close a currently open window before opening a new one.
- On some of the IPS subwindows, the selection you make from a pull-down menu is displayed in the lower-right corner of the window. It remains until you close the window or enter a selection/value elsewhere on that same window.

Figure 1-5. **Window displaying the selection made from a pull-down menu (lower-right corner)**



Buttons

A selection button displays as an oval or box (except for the Stop and Continue buttons) containing a function name, but no inverted triangle.

Figure 1-6. **Example of a selection button from the IPS main window**

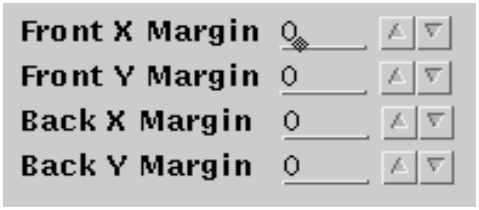
To use a button:

1. With the cursor positioned over the button, click the left mouse button.
2. If the selection button is a toggle (turning a selection on/off), you can alternately select and deselect it by repeatedly clicking it with the left mouse button.

Incremental spin buttons

An incremental spin button consists of a line displaying a numeric value, with buttons next to it containing arrows.

Figure 1-7. **Example of incremental spin buttons**



To select an item that has incremental spin buttons:

1. Position the cursor on the triangle (up arrow) button to increase the value displayed, or on the inverted triangle (down arrow) to decrease the value.
2. Repeatedly click or hold down the left mouse button until your desired value is displayed.

Note: You can also enter the values on the line next to the spin buttons. Refer to “Entering text,” later in this chapter.

Note: On some windows, the value you enter or select is displayed in the lower-left or -right corner of the window. It remains until you close the window or enter a selection/value elsewhere on that same window.

Moving a window or icon

Windows and icons may be moved and repositioned where you want them on the screen. You may need to do this when a window you display covers all or part of another window you also need to see.

Drag and drop procedure

To move an item on the screen:

1. Position the cursor on the icon or on the title bar of the window you want to move.
2. Hold down the left mouse button while moving the cursor to the desired location. The window or icon moves with the cursor as long as you hold down the mouse button.
3. Release the mouse button when the item is where you want it.

This procedure is often referred to as “drag and drop.”

Uncovering a window

Clicking with the left mouse button on a window’s title bar places that window in front (or on top) of any icons or windows that are overlapping it. You would do this if you want to view an entire window that is partially covered by other windows or icons you do not want to close.

If the title bar of the window you want is completely covered, use the “Front” key on the keyboard, or drag and drop the other windows away to expose enough of the title bar to click on. (Refer to “Drag and drop procedure,” above.)

Reducing a window

There are two ways to “shrink” a window on the screen, that is, to get it out of your way without closing it:

- **Resizing from the corner:** Position the cursor on one of the window’s corners and hold down the left mouse button. A small, target-shaped icon displays at the point of the cursor. Drag the corner of the window in the desired direction to shrink or expand the window. (You are not able to resize the window if the “target” icon is not displayed.)
- **Reducing to an icon:** If a window has a button containing an inverted triangle in the upper left corner on the title bar, you can reduce the window to an icon on the screen background by single-clicking the triangle button. To restore the window to its original size, double-click that icon with the left mouse button.

Note: Reducing a window to an icon does not in any way interfere with any ongoing process that was initiated from that window. It does not close the window.

Entering text

Some windows contain lines on which you can enter text such as file names or numeric values. At the beginning of a text field, there is a small icon. This icon displays as a dark triangle when the cursor is positioned anywhere in the window containing the text field. When the cursor is outside the window, the icon on the line becomes a grayed-out diamond shape, and you cannot enter text in the field.

Here are some rules for entering text on a window:

- If a window contains more than one text field, click the left mouse button on the text field you want to use, before beginning to type.
- You can enter text only when the line displays the dark triangle icon. Text that you enter displays in front of the triangle.
- To highlight or select text in a text field:
  1. Position the cursor at the beginning or the end of the text you are selecting.
  2. Holding down the left mouse button, drag the cursor to the right or left until the desired text is highlighted.
  3. Release the mouse button.
- To delete text in a text field, do either of the following:
  - Position the cursor to the right of the text to be deleted and press either <DELETE> or <BACKSPACE>. This erases the character to the left of the cursor. If you hold down either of these keys, characters continue to be deleted to the left until you release the key or all characters are erased.
  - Highlight the text you want to delete, then press <DELETE> or <BACKSPACE>.
- To move text:
  1. Highlight the text to be moved.
  2. Position the cursor on the highlighted text.
  3. Holding down the left mouse button, drag the highlighted text to the right or left on the same line, or to another line on the same window, and release the mouse button.

Note: You cannot drag text from one window to another.

Exiting a window

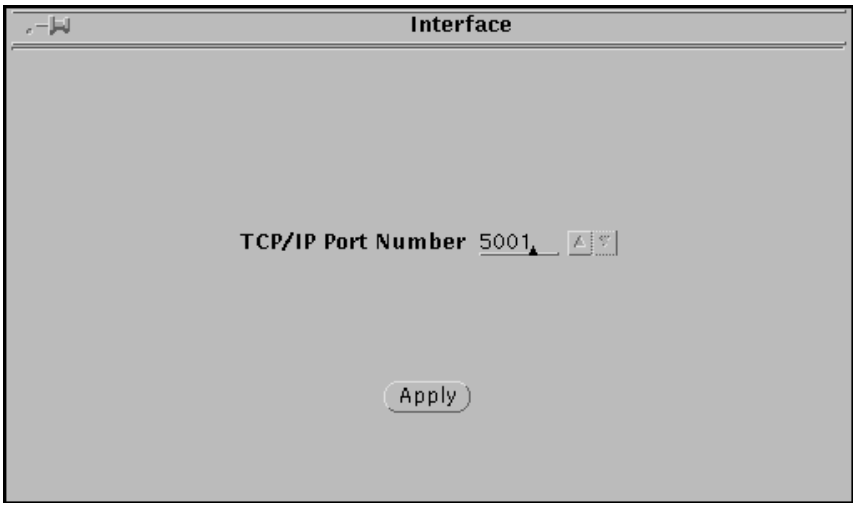
You can exit most IPS windows by clicking the left mouse button on a Quit, Done, or Cancel button. Sometimes an Apply button closes the window after applying what has been specified or selected.

Pin buttons

In addition, on certain windows, there is a small button in the shape of a push-pin in the upper-left corner on the title bar (illustrated in the following examples).

- **If the pin is “out:”**

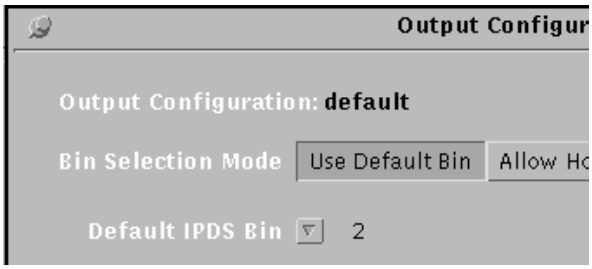
Figure 1-8. **Window with pin button “out”**



  - — You can exit the window by double-clicking the pin button.
  - — The window automatically closes after you make a selection from it.
  - — To change the pin to the “in” position, single-click the pin button.

- **If the pin is “in:”**

Figure 1-9. **Upper-left portion of a window with pin button “in”**



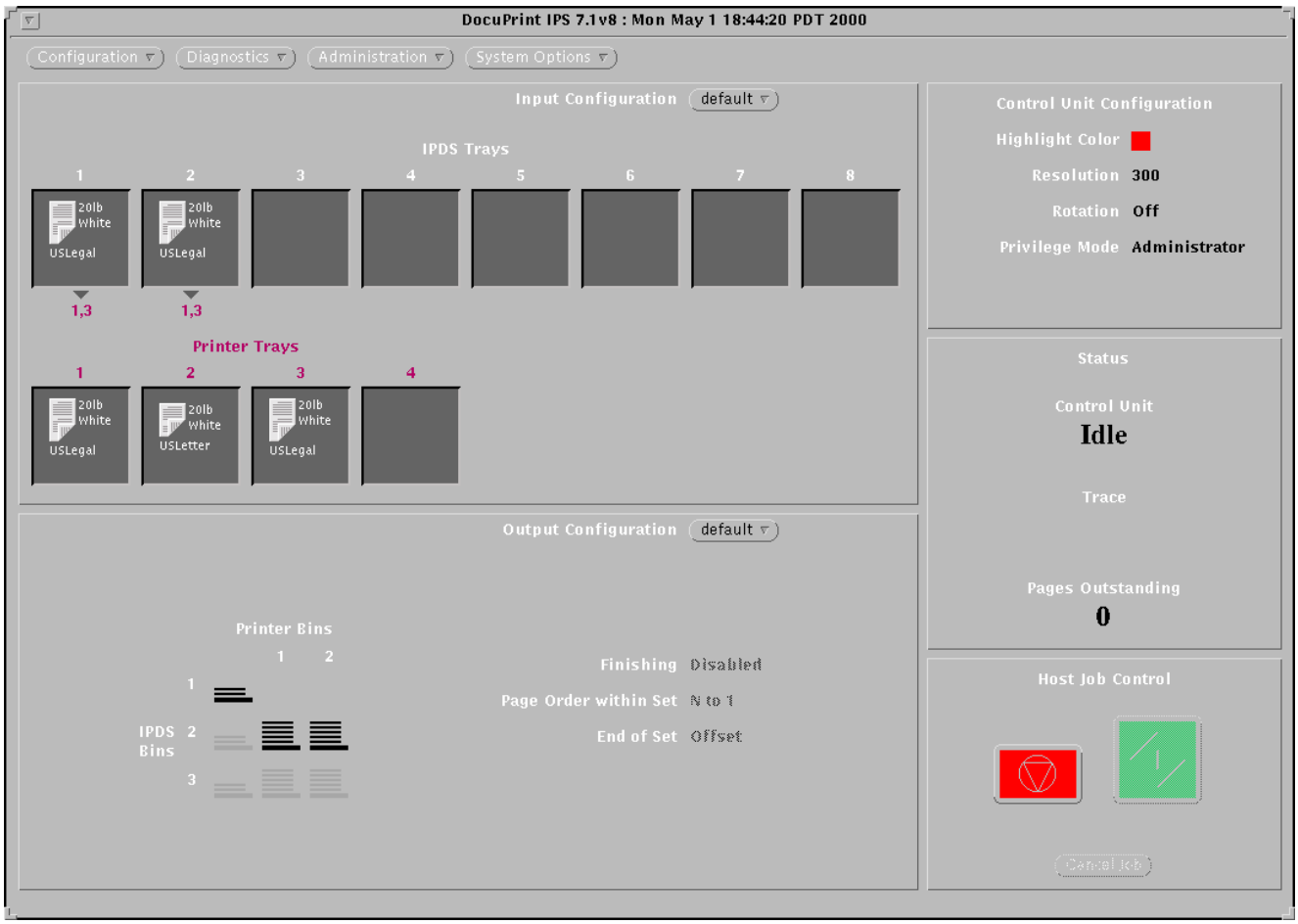
  - — You can exit the window by single-clicking the pin button.
  - — The window remains open after you make selections from it.

IPS main window

To configure your system, use the IPS main window to provide access to the Configuration, Diagnostics, Administration, and System Options menus, and to the Input and Output Configuration subwindows. You return to this window from each of the subwindows after you have made your selections.

Caution: When you are using the mouse on the IPS main window, it is possible to delete the window by selecting **Quit** from the pull-down menu on the title bar. Should this occur, you must reboot the Sun workstation. (Refer to the “Starting and stopping the system” chapter for the rebooting procedure.)

Figure 1-10. **IPS main window**



Menus

The IPS main window displays the following pull-down menus:

- Configuration
- Diagnostics
- Administration
- System Options.

Note: Clicking or pressing the right mouse button with the cursor on the title bar of a window displays a title bar pull-down menu. This menu contains options having to do with displaying the window (for example, the Refresh option redisplays or redraws the window).

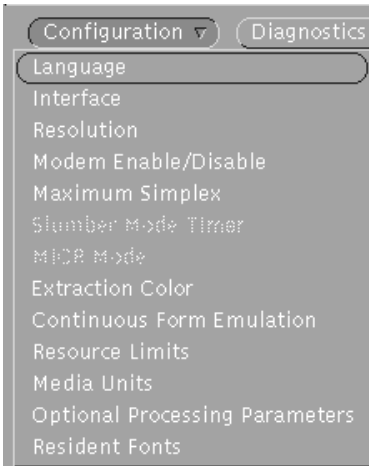
The title bar pull-down menu is generated by the Windows system on your Sun workstation and does not apply to the IPS software. You should not have occasion to use it.

Configuration menu

Use the Configuration pull-down menu on the IPS main window to set up various options in the Printer Controller. The figure below illustrates the items available from the Configuration pull-down menu, followed by an explanation of each item.

Note: Items in the Configuration pull-down menu that appear "grayed out" on the screen are unavailable for use with your system's configuration.

Figure 1-11. **Configuration pull-down menu**



The Configuration pull-down menu contains the following items:

- **Language** — Allows you to select the language in which GUI messages will display.

Note: The printer status and fault messages are not part of this feature.

- **Interface** — Allows you to specify the current interface and the interface options you want to use.
- **Resolution** — Allows you to specify the resolution of the fonts and other resources in the incoming job (240 or 300). This resolution must match the font resolution in the PSF start-up procedure (PROC) for MVS, or the font resolution set up by the PSFCFG command for AS400.

Note: When you change the resolution, you must reboot the system.

- **Modem Enable/Disable** — Enables or disables the modem if it is installed by your service representative for diagnostic purposes. This modem is used for dial-in servicing and diagnostics when needed by your service representative.
- **Maximum Simplex** — For jobs containing both duplex and simplex pages; the Maximum Simplex option allows you to specify the maximum number of simplex pages that will print in duplex mode before the system clears the paper path and switches to simplex mode.
- **Slumber Mode Timer** — Not supported on the 4850/4890 IPS.
- **MICR Mode** — Not supported on the 4850/4890 IPS.
- **Extraction Color** — Allows you to specify how the solid-color, shaded, and tinted areas specified in the job sent from the host will actually appear when printed by the IPS.
- **Continuous Form Emulation** — Rotates the page origin 90 degrees. This allows the IPS to print on cut sheets the jobs designed for a continuous forms printer.
- **Resource Limits** — Enables you to allocate additional memory for resources such as forms, fonts, and page segments.
- **Media Units** — Allows you to specify the units of measurement to use for weight and size.
- **Optional Processing Parameters** — Allows you to set processing parameters such as the model number reported to the host.
- **Resident Fonts** — Allows you to display current resident fonts on your system, and to add new resident fonts.

Diagnostics menu

Use the Diagnostics menu to print samples and specify trace mode options. (It is also used by your service representative to access system diagnostic functions.)

Figure 1-12. **Diagnostics pull-down menu**

The Diagnostics pull-down menu contains the following items:

- **Sample Prints** — Allows you to print sample files (test patterns), to exercise the print engine, and to perform a manual print quality adjustment (PQA).
- **Trace Options** — Allows you to capture and execute a diagnostic trace of your system. This function is available to Administrator and Service privilege mode users only.
- **Service Mode** — Accessed by your service representative; This function is available to Service privilege mode users only.
- **Debug Level** — Displays different levels of debug messages to be stored in log message files. This function is available to Administrator and Service privilege mode users only.

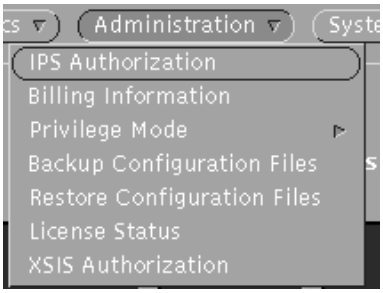
Note: Operating at a Debug Level other than 0 could reduce throughput speed.

- **Null Modem Connection** — Accessed by your service representative; This function is available to Service privilege mode users only.
- **Log Service Call** — Accessed by your service representative; This function is available to Service privilege mode users only.
- **Update from CDROM** — Allows you to update your software using a CD. This function is available to Administrator and Service privilege mode users only.
- **Update from Floppy** — Allows you to update your software using a diskette. This function is available to Administrator and Service privilege mode users only.
- **Install Remote Update** — Allows you to update your software remotely. This function is available to Administrator and Service privilege mode users only.

Administration menu

Use the Administration pull-down menu to access windows for performing administrative tasks, such as billing reporting.

Figure 1-13. **Administration pull-down menu**



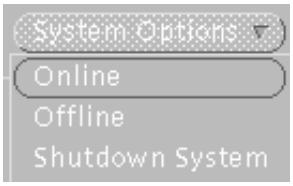
The Administration pull-down menu contains the following items:

- **IPS Authorization** — Enables entry of your IPS operating system software license text string, provided by Xerox, which authorizes you to use the IPS software. The IPS cannot receive data from the host until this license is enabled. (This is usually done by your service representative.)
- **Billing Information** — Displays the meter readings for the system.
- **Privilege Mode** — Enables changing of:
  - The privilege mode
  - The password for a selected privilege mode (Operator or Administrator).
- **Backup Configuration Files** — Enables backing up of:
  - System configuration files
  - Input group configuration files
  - Input DFA Profiles
  - Media library files
  - Output group configuration files
  - Output DFA Profiles.
- **Restore Configuration Files** — Enables restoring of files backed up on diskettes.
- **License Status** — Displays the license status for your system.
- **XSIS Authorization** — (DFA systems only) Enables entry of your XSIS Authorization license text string, which enables the Enhanced Set Recovery option for your system, resulting in reprinted DFA output sets.

System Options menu

Use the System Options pull-down menu to take the IPS online and offline, and shut down the system.

Figure 1-14. **System Options pull-down menu**



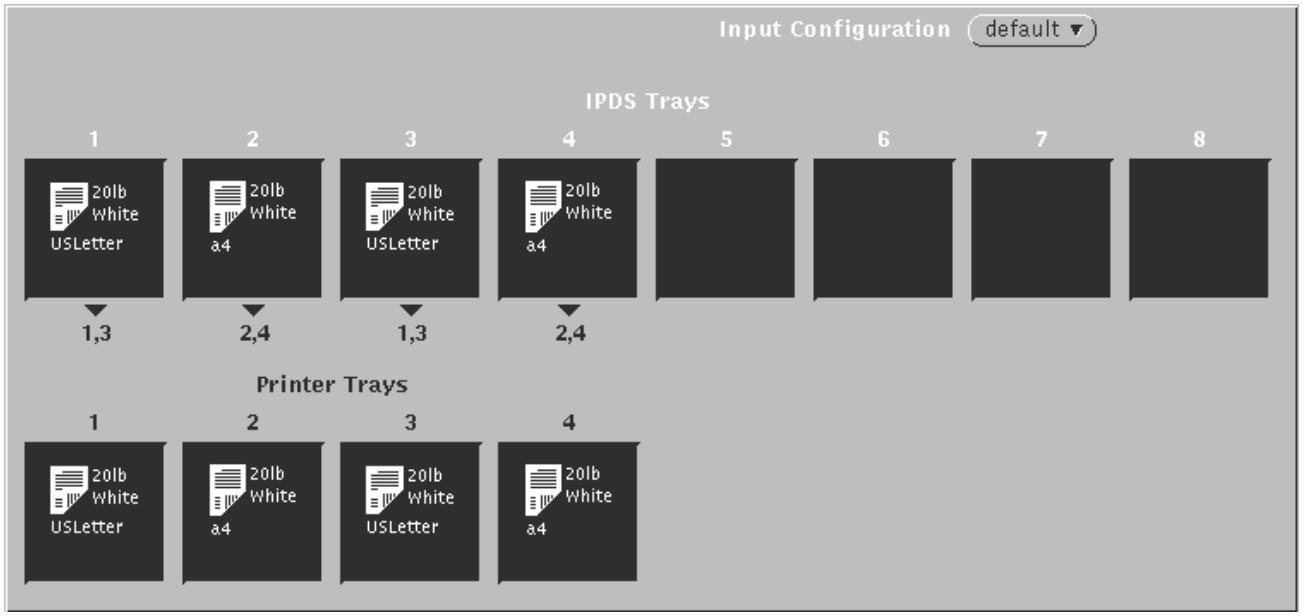
The System Options pull-down menu contains the following items:

- **Online** — Places the system online.
- **Offline** — Takes the system offline.
- **Shutdown System** — Shuts down the system. This option stops all processes running on the Printer Controller, stops the printer, and returns to the boot prompt of the operating system.

Input Configuration section

The Input Configuration section of the main window provides access to the windows that enable you to configure the printer input trays to feed the stocks you want to be used in the print job. It also displays the current configuration of the feeder trays.

Figure 1-15. **Input Configuration section of IPDS main window**



The Input Configuration section—the upper part of the larger left column—contains the following fields:

- **Input Configuration** pull-down menu — Allows you to select an Input Configuration window. Once you select an Input Configuration window, you will be able to modify margin settings from that window, and to create or change Input Configurations, DFA personality profiles, and media icons.
- **IPDS Trays** — Graphically shows the stocks that the current configuration has associated with the input trays that are called out in the job (IPDS data stream).

  This field consists of a row of eight boxes called “tray cells,” each of which represents an input tray that a job might specify. The number above each tray cell is the tray’s identification number. The number(s) below each tray cell indicate the printer trays to which the IPDS tray has been mapped.

  Any IPDS tray for which a particular stock has been identified displays a media icon in its tray cell. A media icon graphically represents a stock, showing its weight, color, size, and form type (3-hole, etc.).

Note: You map an IPDS tray to a printer tray by placing a media icon for the same stock in the cells for both trays.

The mapping of IPDS trays determines the use of system memory for handling media of different sizes. It is recommended that media that are not used in a particular job is not placed in an IPDS cell.

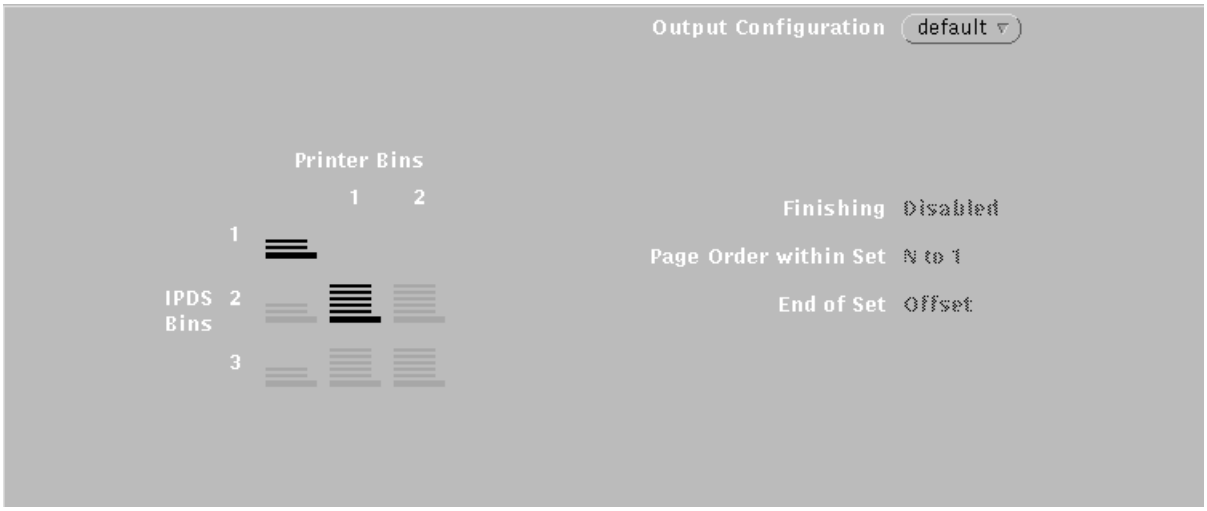
- **Printer Trays** — Graphically shows the stocks that should be loaded in the physical feeder trays for the current input configuration.

  The Printer Trays field consists of a row of tray cell boxes, each of which represents one of the printer's feeder trays. (The number of cells in this field is the number of input trays your IPS printer supports.) Tray cells for feeder trays in which stocks will be loaded contain media icons representing those stocks.

Output Configuration section

The Output Configuration section of the IPS main window provides access to the windows that enable you to configure the printer stacker trays to ensure printed output is delivered to the desired output tray or bin. It also displays the current configuration of the stacker trays.

Figure 1-16. **Output Configuration section of IPS main window**



This section—the lower part of the larger left column—contains the following fields:

- **Output Configuration** pull-down menu — Allows you to select an Output Configuration window. Once you select an Output Configuration window, you will be able to create or change Output Configurations and DFA personality profiles.
- **Printer Bins —** Graphically shows how IPDS output destination bins have been mapped to the physical printer bins.

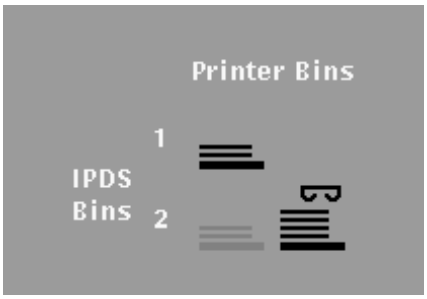
  In the Output Configuration section of the main window, the horizontal rows of icons represent the IPDS bins specified in the job as the output destination. The vertical columns represent the actual printer bins to which output will be delivered.

  When a bin has been selected as part of the configuration, it displays bolded on the screen. By looking at the printer bin number at the top of the column above each bolded icon, and at the IPDS bin number at the beginning of the row beside the same bolded icon, you can see which IPDS bins have been mapped to which printer bins.

Note: IPDS bin 1 is coded in the software to be mapped to the sample tray. The IPDS row 1 contains only a sample tray icon, which always displays bolded; there are no other printer bins available to select. You are not able to change this part of the output configuration. If "Allow Host Control" is selected, all parts of any print job in which the data stream calls for IPDS bin 1 are delivered to the sample tray.

Note: If your system has a stitcher/stacker instead of the dual stacker, your output configuration display shows only one stacker bin icon, which has a diagram of a staple above it.

Figure 1-17. **Output Configuration Bins field, stitcher/stacker configuration**



- **Finishing** — Displays "Enabled" if the system is configured with a bypass transport or a stitcher/stacker, and "Finishing" or "Stitching" is selected from the Output Configuration window. For information on specifying finishing attributes, refer to the section "Creating a new output configuration" in the chapter "Setting the system configuration.

  If the system has no bypass transport or stitcher/stacker, this field is grayed-out and displays "Disabled."

- **Page Order Within Set —** Displays the current setting for the order in which pages are placed in the output bin, from 1 to N (ascending) or N to 1 (descending). If your system does not have a bypass transport, or if the Finishing field displays "Disabled," this field is grayed out and always displays "N to 1."

- **End of Set —** If your DocuPrint 4850/4890 IPS is configured with the stitcher/stacker, or a bypass transport is installed on your DocuPrint 4890 IPS, this field displays the criterion (MARKFORM or Offset Stacker) that was selected from the Job Attributes window to indicate the end of a set or segment within a job.

  If your system does not have the stitcher/stacker configuration or a bypass transport, or if the Finishing field displays "Disabled, this field displays grayed-out and always displays "Offset."

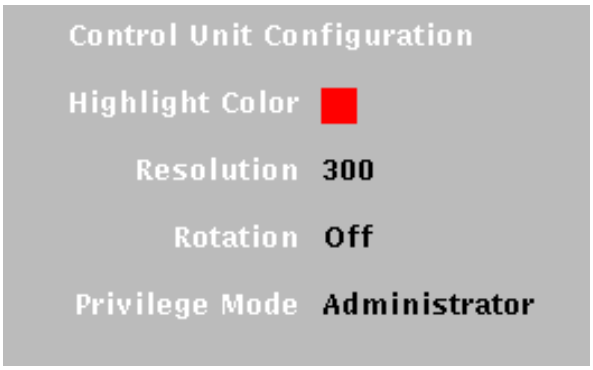
Setup and status information

The following system setup and status information is displayed in the right column of the IPS main window:

Control Unit Configuration section

Displays the current configuration of the system. Items that appear here include:

Figure 1-18. **Control Unit Configuration section of main window**



- **Highlight Color —** Displays the color dry ink installed in the printer.
- **Resolution** — Shows the resolution in dpi of the fonts used in the current or most recent job sent to the IPS. This field reflects the value entered on the Resolution window, accessible through the Configuration pull-down menu.
- **Rotation** — Indicates whether Continuous Forms Emulation is enabled.
- **Privilege Mode** — Indicates the current Privilege Mode (Service, Administrator, Operator, or User).

Note: When a remote Shell is activated, “Remote Shell Active” displays on the window.

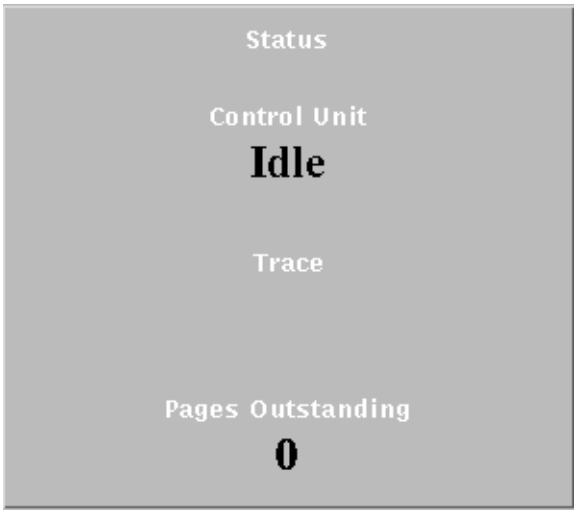
When a remote Shell is activated and a service representative dials in remotely, “Remote Session Active” displays on the window.

For information on activating a remote shell, refer to the “Setting up the printer controller” chapter, “Enabling or disabling the modem” section.

Status section

The following items appear in the Status (middle) section of the right column on the main window. They indicate what the printer is doing.

Figure 1-19. **Status section of main window**



- **Control Unit** — Indicates whether the system is Receiving, Processing, Printing, Idle, Stopped, or Not Ready, or has an error condition (Not Ready, Error, and Fault appear in red). In case of a Fault, reboot the system.

Note: The Control Unit status remains Not Ready if any sub-menu items under a pull-down menu are activated and then canceled. To display the correct status, access the item(s) that were previously activated and canceled, and select only the "Cancel" button.

- **Trace** — Indicates whether a trace is currently being captured or executed.
- **Pages Outstanding** — Displays the number of pages that have been received by the system but have not yet been printed.

Note: *N-Up* jobs are processed in logical pages, not physical pages. The number of logical pages per physical page varies based on characteristics of each job. The Pages Outstanding counter increments in logical pages, not physical pages.

Main window footer

Messages appear in the lower-left corner of the footer space, which extends across the bottom of the IPS main window. These messages let you know the system status, and include "Offline" or "Online."

Host Job Control section

The Host Job Control section, located in the lower-right corner of the IPS main window contains three buttons:

- Stop
- Continue
- Cancel Job.

Figure 1-20. **Host Job Control section of main window**

Stop and Continue buttons

Use the Stop and Continue buttons to perform the same functions as actual buttons on the printer:

- **Stop** — Allows you to interrupt job processing. You must also click this button before you can click the Cancel Job button to cancel printing.
- **Continue** — Allows you to resume job processing.

Note: If you use the screen Stop button to stop a job, you must use the screen Continue button to resume printing. You cannot use the printer buttons interchangeably with the screen buttons.

Cancel Job button

Use the Cancel Job button to cancel the current print job and allow the printer to proceed with the next job in the host queue. You must click the Stop button before you click the Cancel Job button.

If no job is being processed, this button is grayed out and cannot be selected. If a job is in progress, this button remains grayed out until you click the Stop button and the printer has stopped.

Subwindow buttons

This section describes some of the buttons that appear on sub-windows accessed through the main window pull-down menus and the Input and Output Configuration section.

Add Saves new input/output configurations and media icons you create, and displays the Ask for File Name window, where you are prompted to give the new file a name. On the Create and Edit a Media Icon windows, adds a new form type to the list.

Add Profile Saves new DFA personality profiles you create, and displays the Ask for File Name window, where you are prompted to give the new file a name.

Saves new DFA personality profiles you create, and displays the Ask for File Name window, where you are prompted to give the new file a name.

Apply & Update Saves changes you make to an input or output configuration file and puts the changed configuration into effect (followed by confirmation prompt).

Delete Erases the file you select from one of the pull-down menus (followed by a confirmation prompt).

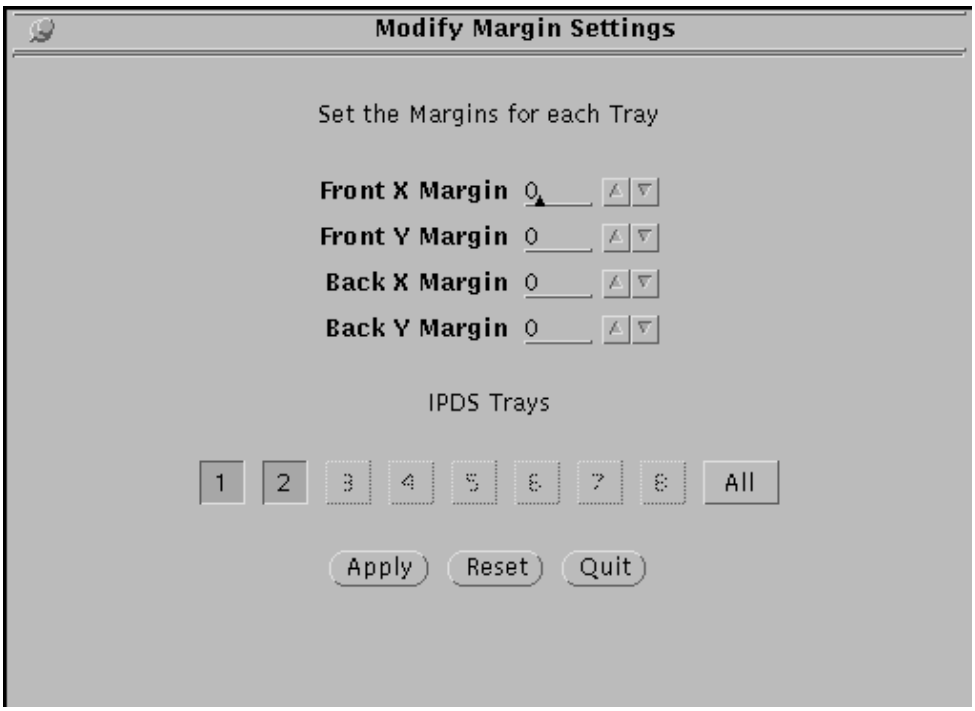
Quit and Apply buttons Use the Quit and Apply buttons on the IPS main window and on other windows throughout the system to apply and cancel your system settings.

- **Quit** — Closes the current window but does not undo any selections or text entry you have made on the screen. However, your changes are not saved unless you first click Save or Update.
- **Apply Now** — Puts a new or revised DFA profile into effect for an input or output configuration.

  Apply and Save — Puts a new or revised DFA profile into effect for an output configuration.
- **Apply** — Puts a new or revised selection, setting, media icon, or input/output configuration into effect.

The figure below shows one of the windows that contain the Quit and Apply buttons.

Figure 1-21. **Window with Quit and Apply buttons**



Reset On the Create a new Media Type and Edit a Media Type windows, restores the attribute settings displayed on the window to the system defaults.

If selected after you have input changes to a previously saved media icon, restores the icon's original saved attributes.

Clear On the Output DFA windows, signals the printer to disable the selected DFA profile name. Resets all profile parameters in printer memory to zero. You would use this button, for example, if you were going to remove or take offline your third-party feeding or finishing equipment.

Save Saves changes you make to an existing file, such as an output configuration. Also saves new configuration and DFA personality profile files you create, after you type the new file name in the Ask For File Name window.

Update Saves changes made to an input or output configuration file, but does not put that configuration into effect (followed by a confirmation prompt).

2. Starting and stopping the system

This chapter describes how to start and stop your printing system. It addresses the proper methods of powering the system on and off, starting and stopping print jobs, shutting down the system, and dealing with power failures.

Powering on the IPS system

When you power on the IPS, it is important to perform all procedures in the correct order, including some tasks required before powering on.

Before powering on

Before powering on the system, make sure the following has been done:

- The Printer Controller and monitor are connected to dedicated power receptacles.
- The printer cable is connected securely to the connector on the back of the Printer Controller. If the cable is not connected, make sure the printer and Printer Controller are powered off. Then connect the cable.

  Caution: Do not connect the printer cable to the Printer Controller when either the Printer Controller or the printer is powered on; you could destroy the interface card in the Printer Controller.
- Press the Power switch on the printer to the On position so that the printer powers on automatically when the Printer Controller is powered on. The Printer Controller automatically boots the IPS software when it is powered on.
- Make sure all feeder trays are in Ready position: closed, with adequate paper loaded. Otherwise the IPS cannot initialize, and it reports “Not ready” to the host.

  If this occurs, correct the tray condition, then reboot the workstation. (Refer to “Rebooting the Printer Controller,” later in this chapter.)
- Always allow at least ten seconds between powering off the printer and powering it back on again. This pause prevents possible damage to the sensitive components in the processor.

Powering on procedure

Power on the IPS system in the following sequence:

1. Power on all peripherals, such as the optional tape drive and display monitor.
2. If your system is channel-attached, power on the Host Channel Unit (HCU). When the HCU is ready (offline) the code **2** displays in its LED window. You can now power on the remaining components.

Note: The HCU displays a **2**. When the Sun workstation is completely booted, the display shows **0**.

See "HCU Messages" in the *Xerox DocuPrint IPS Messages Guide* for a list and explanation of HCU codes.

3. Power on the printer, if necessary.
4. Power on the Sun workstation processor. The operating system for the Printer Controller and the IPS application software are automatically loaded.
5. If the printer is not warmed up by the time the Controller has booted, the window containing the message DocuPrint IPS Initializing, "Waiting for Printer Configuration" remains on the screen. Either:
   - Wait for the printer to warm up and the message to disappear (which takes a varying amount of time), or,
   - Use the following procedure to reduce the amount of boot time:
     a. With the cursor on the blue screen background, click the right mouse button to display the workspace pull-down menu.
     b. Select Restart from the workspace menu, then Confirm from the confirmation prompt that displays. The Printer Controller reboots.
     c. After the Controller boots, a window displays with the message "Media Definition Conflict" (because no default input configuration has been applied). Click OK to display the Input Configuration window.
     d. Make sure the paper loaded in the feeder trays matches the stock specified in the Printer Trays cells on the Input Configuration window. If it does not, make any necessary changes to the paper in the trays or to the media icons in the tray cells. (Refer to "Specifying the input configuration" in the "Setting the system configuration" chapter.)
     e. Click Apply & Update on the Input Configuration window.
     f. On the confirmation prompt window that displays, click Apply.
     g. Click Quit on the Input Configuration window. The IPS main window displays.

Powering off the IPS system

Do not power off the system until it has stopped printing.

Note: Powering off the system at the end of the day is not necessary. However, doing so does not damage the system.

Always power off the system before you do any of the following:

- Remove or install a processor part
- Remove or install an external drive unit or monitor
- Unplug the processor power cord
- Recover from a system that does not respond to the keyboard or the mouse
- Prepare for an expected power outage
- Physically relocate the system.

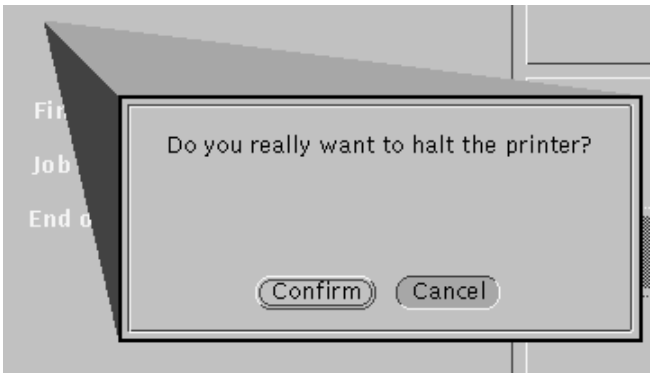
Note: When a power outage occurs, turn off the power switches on all your equipment. This protects your equipment from possible power surge damage when power is restored.

In routine operation

When powering off the system, follow this sequence:

1. Make sure no print jobs are running. Take the IPS offline from the host by selecting Offline from the System Options menu on the IPS main window.
2. Use one of the two methods below to shut down the Printer Controller. Both methods immediately stop all processes running on the Printer Controller and on the printer, and return to the Boot prompt for the operating system.
   - With the pointer in the desktop background area of the screen (not in a window or on an icon), press the *right* mouse button. On the workspace menu that displays, select Shutdown.
   - With the pointer in the IPS main window, select Shutdown System from the System Options menu.
3. In the System Shutdown Confirmation window, click Confirm.

Figure 2-1. **System Shutdown Confirmation window**



Caution: Shut down the Printer Controller only when no print jobs are running and the IPS is offline from the host.

4. Power off the display monitor.
5. Power off the printer.

Note: Unless the IPS will remain powered off for an extended period, or is to be moved, it is not necessary to power off the printer. Powering off the processor also powers off the printer.

6. Power off the Sun workstation processor.
7. Power off the HCU (if operating in channel-attached mode).

After a power outage

If an unexpected power failure occurs, switch off the printer and all components of the Printer Controller. Switch the components back on only after power is restored. Take the printer offline as soon as possible.

Caution: If you do not switch off all indicated components, a power surge may damage them when power is restored.

If the power fails during printing, the print job is interrupted but not lost. Although data is not lost, you should take the printer offline as soon as possible to prevent data being sent before the printer is ready to receive it.

To restart the system after an unexpected power failure, restart the system as described in the “Powering on the IPS system” section above.

Communicating with the host computer

An IPS is either channel-attached to a host computer or receiving data via TCP/IP over Ethernet or Token Ring. It receives data from the host in online mode. Before data can be sent to the printer, the host operator must issue commands to place the IPS online to the host.

Placing the IPS online

The IPS is placed online when the IPS software is loaded. This software is automatically loaded when the Printer Controller is powered on.

If the printer has been taken offline, select Online from the System Options menu on the IPS main window.

If the printer does not go online after the system has been booted, contact your service representative.

Taking the IPS offline

Select Offline from the System Options menu on the IPS main window.

The printer continues to print the pages that remain in the buffer.

If you want to resume printing, select Online from the System Options menu on the IPS main window.

Printer status

The default printer status is online and ready to print. The current status is displayed in the Control Unit Status field on the IPS main window.

The IPS Print Engine Monitor window displays messages on the condition of the printer.

Starting a print job

Once the channel or communications system is enabled, the paper is loaded, trays are selected, and the printer is ready, the IPS system can receive print jobs. The host application can also release any queued jobs for printing.

Caution: Be sure the IPS main window is displayed while printing from the host. Otherwise, the results are unpredictable.

Follow these steps to start printing a job that has been sent from the host:

1. Verify that the system is set up as required for the print job.
2. Make any changes necessary to the system configuration using the procedures contained in this chapter.

Jobs are printed in the order they are sent.

Note: If you are printing samples, you must exit the Sample Printing window before you can print from the host.

Stopping the printer

At times, you may need to stop the printer while it is printing—for example, to check output or cancel a job. In addition to stopping a print job from the application at the host, you can stop printing in three ways:

- Pressing the red Stop button on the printer control console. This is the preferred method and stops the printing immediately.
- Clicking the red Stop button on the IPS main window.

The printer continues to print the pages that remain in the buffer.

Caution: If you select Offline during a duplex printing job, you might interrupt the job just after the front side of a duplex sheet is printed. Should this occur, the printer finishes with a blank reverse side. After the printing resumes, the corresponding back of the duplex page prints as a simplex sheet.

Resuming printing

You must always resume printing an interrupted job in the same way you stopped it:

- If you pressed the red Stop button on the printer control console, you must use the Continue button on the printer control console.
- If you clicked the red Stop button on the IPS main window, you must click the green Continue button on the IPS main window.

Automatic print job recovery

When a jam occurs, the Printer Controller performs a job recovery. In more severe conditions, the printer reinitiates a system status check.

If HCU errors occur while printing over a channel, reboot the Sun workstation and the HCU. Job recovery restarts and resumes at the last checkpoint held by the host.

Rebooting the Printer Controller

To reboot your Printer Controller without powering it off, follow these steps:

1. With the pointer in the desktop background area of the monitor screen (not in a window or on an icon), press the right mouse button to display the workspace pull-down menu.
2. Select Restart.

Exiting power saver mode

If your IPS is left idle for a predetermined amount of time (set by your service representative at installation), the system goes into power saver mode and a screen-saver icon is displayed on an otherwise blank screen.

- Press any key to redisplay the monitor screen.
- Press the Continue button on the printer control console before sending jobs from the host. This notifies PSF that the printer is in the Ready state.

Removing media from the processor

This section explains how to eject a diskette from the diskette drive, and how to remove a CD from the CD-ROM drive.

Ejecting a diskette

To eject a diskette, follow these steps:

1. Place the cursor in the screen background area and press the right mouse button. The workspace menu displays.
2. Do one of the following:
   - Select **Eject disk** from the workspace menu, or
   - Open a command tool and enter the **eject** command:
     a. Place the cursor on the blue background of the user interface screen, and click or hold down the *right* mouse button to display the workspace menu.
     b. Select **Command Tool** from the workspace pull-down menu. A command tool window opens.
     c. Enter **eject** on the command tool window.
     d. Close the command tool window by selecting Quit from the window's title bar pull-down menu.

Removing a CD

To remove a CD from the CD-ROM drive, press the eject button.

3. Setting up the Printer Controller

This chapter describes the procedures that are required to set up your Printer Controller to receive and process the types of print jobs you will be running.

Tasks requiring a Controller reboot

Several of the tasks accessed from pull-down menus on the IPS main window require the Printer Controller to be rebooted to put the new settings into effect. (The procedure for rebooting the Printer Controller is in the “Starting and stopping the system” chapter.) You will need to reboot after performing the tasks associated with these selections:

Note: You can change one or more of these settings at a time before rebooting.

Configuration menu:

- Language (chapter 3)
- Resolution (chapter 4)
- Optional Processing Parameters (chapter 4).

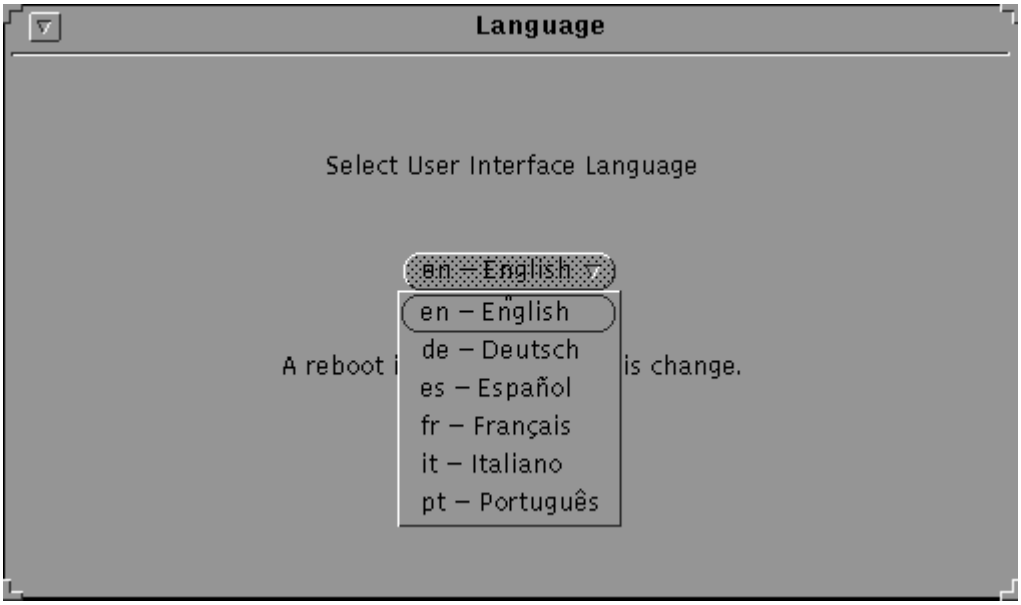
For an illustration of the Configuration menu, refer to the “Introduction to the graphical user interface” chapter.

Selecting a language

You can select the language in which the GUI panel and labels will display.

1. From the Configuration pull-down menu, select Language. The Language window displays.
2. From the pull-down menu, select the language of your choice.

Figure 3-1. **Language window**



3. After you have made the selection, reboot the system to put your selection into effect.

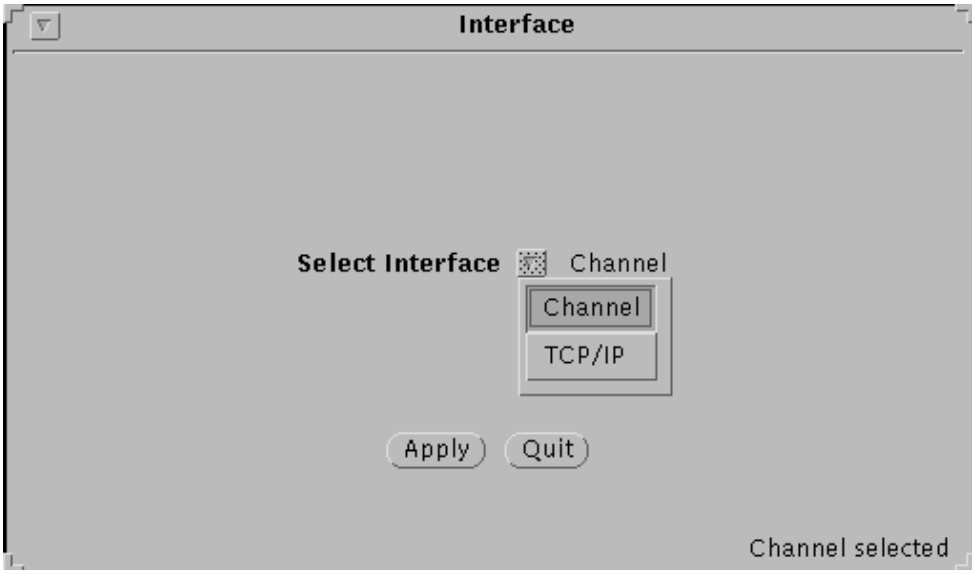
Specifying the system interface

This section describes the procedure for specifying the network or channel interface for your system. Your options are Channel and TCP/IP.

Note: You can have a bus and tag channel connection plus multiple TCP/IP connections (Token Ring and Ethernet) installed at the same time. Your TCP/IP selection is made at installation and enabled by your service representative. You cannot switch printing between channel and TCP/IP without performing the following procedure.

1. From the Configuration pull-down menu, select Interface. The Interface window displays.
2. From the Select Interface pull-down menu, use the right mouse button to select the interface you want. Your selection displays in the lower-right corner of the window.

Figure 3-2. **Interface window displaying the Select Interface pull-down menu**



3. Make the appropriate selections and entries on the Channel Options or the TCP/IP Interface window. (Refer to the “Selecting channel interface” or the “Selecting TCP/IP interface” section later in this chapter.)

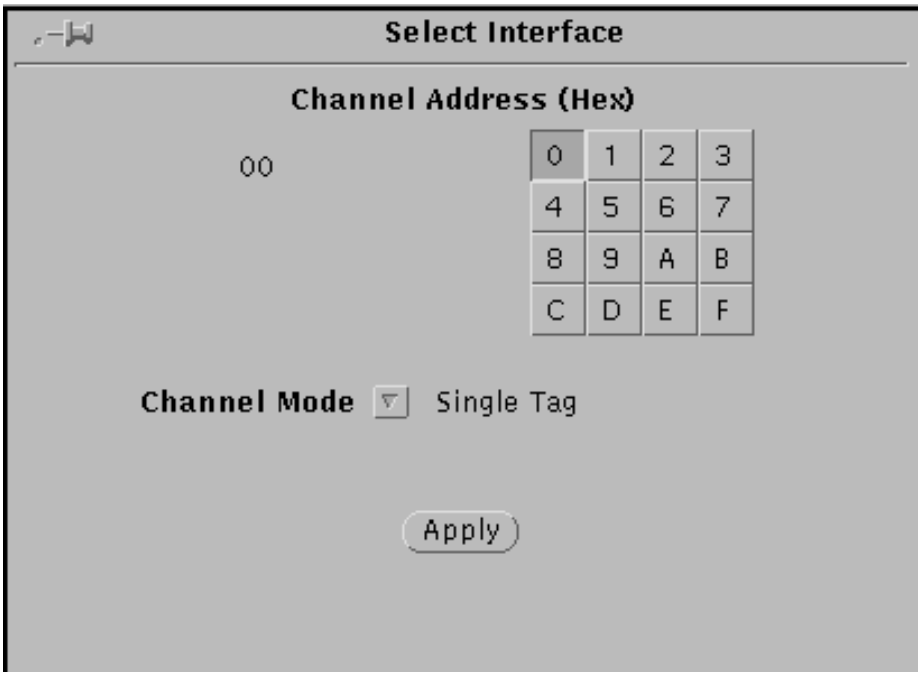
Caution: Selecting the wrong interface for your equipment—that is, selecting TCP/IP for a system with an HCU enabled, or selecting Channel for a system without an HCU—can cause the parser to shut down, making the system unable to print. If this happens, you must reboot the Printer Controller, then change your interface selection.

Selecting channel interface

To specify your interface as a bus and tag channel (parallel channel interface), follow these steps:

1. Select Channel from the Interface window pull-down menu. The Channel Options window displays.

Figure 3-3. **Channel Options window**



2. On the Channel Address (HEX) keypad, click the alphanumeric characters to specify the last two digits of the hexadecimal channel address of your host.
3. From the Channel Mode pull-down menu, select the channel mode for your system. The channel modes specify the operation of the channel signals, determine the data speed, and specify whether the channel interface mode is interlock or data stream.
    - **Single Tag** — Single-tag interlock mode. This is the basic channel transfer mode. It is the slowest method of data transfer. Select this mode when no other transfer mode is available on the host.
    - **High Speed** — High-speed transfer mode. Although it maintains a single-tag interlock mode, this mode provides a higher speed of data transfer than the single-tag mode.
    - **1.25 Mb Data Streaming** — Data streaming at 1.25 MB per second. This mode is faster than either of the two single-tag interlock modes.
    - **2.5 Mb Data Streaming** — Data streaming at 2.50 MB per second. This mode provides the fastest data transfer.
4. Click Apply.
5. In the Interface window, click Apply.

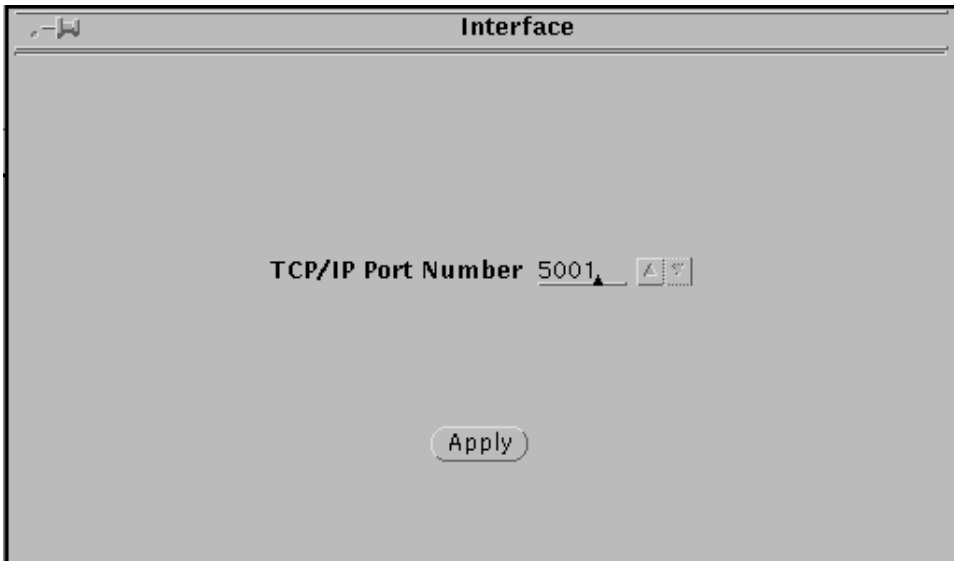
Selecting TCP/IP interface

Note: When the system is sending a resource-intensive job using TCP/IP, the job will take considerably longer to load via the network.

To specify the TCP/IP port number, follow these steps:

1. Select TCP/IP from the Interface window pull-down menu. The TCP/IP Interface window displays, displaying the default port number that PSF is already using for your system.

Figure 3-4. **TCP/IP interface window**



2. Enter or use the incremental spin buttons to display the new port number.

Note: This number must match the port number that your host uses to connect to the printer. 5001 is the default for PSF.

3. Click Apply to confirm your selection. You are returned to the IPS main window.

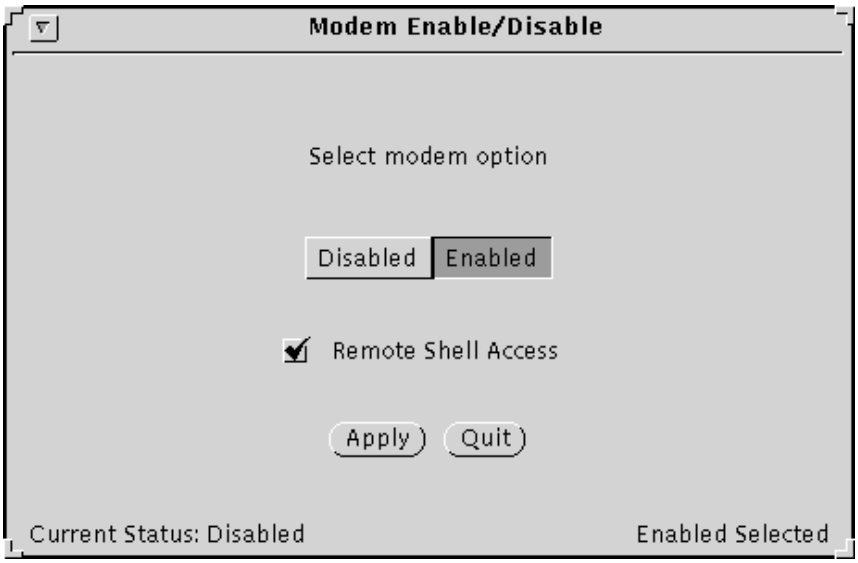
Enabling or disabling the modem

Your service representative may install a modem in your system for diagnostic purposes. This modem is used for dial-in servicing and diagnostics when needed by your service representative.

To enable or disable the modem, follow these steps:

1. Select Modem Enable/Disable from the Configuration pull-down menu. The Modem Enable/Disable window displays.

Figure 3-5. **Modem Enable/Disable window**



2. Click Enabled or Disabled, as appropriate.
3. To allow Shell access to a service representative, mark the “Remote Shell Access” checkbox.
4. Click Apply. The Modem Enable window displays, prompting you for a password.
5. Enter the root password.

Note: The modem will automatically be disabled after rebooting the system.

Allocating memory for resources

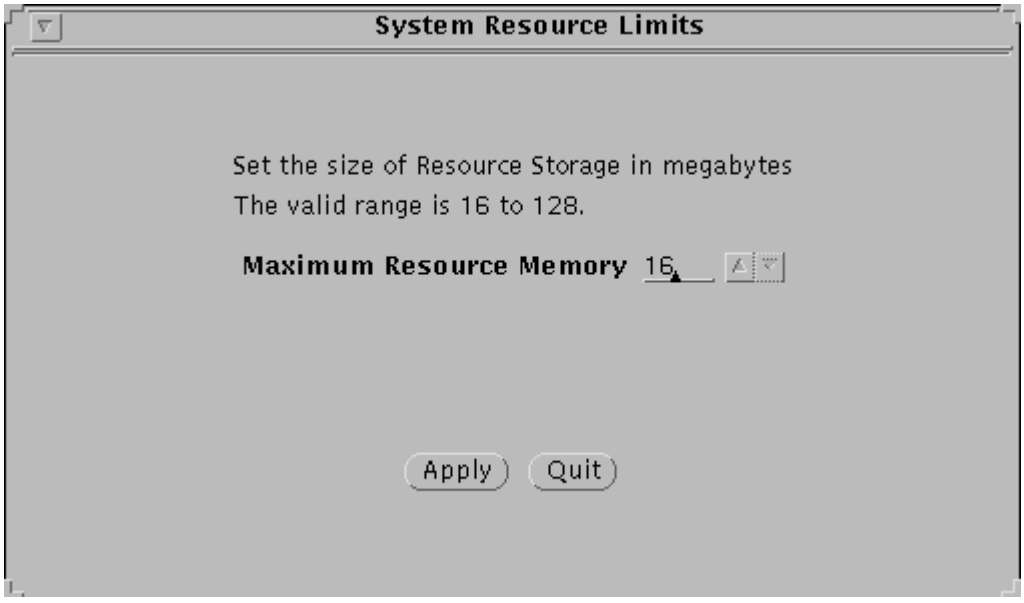
The Resource Limits option allows you to specify additional memory to be used for resources such as fonts and overlays.

Note: Whatever memory you add to your resource allocation will no longer be available for system operation.

If you wish to change the memory allocation to provide more memory for resources, follow these steps:

1. Select Resource Limits from the Configuration pull-down menu. The System Resource Limits window displays.

Figure 3-6. **System Resource Limits window**


System Resource Limits
Set the size of Resource Storage in megabytes
The valid range is 16 to 128.
Maximum Resource Memory 16
Apply
Quit

2. Enter the amount of memory you want allocated to resources, or click the arrows in the incremental spin box to select the value. The range of values is 16-128 megabytes; the default is 16.
3. Click Apply.

Displaying and adding resident fonts

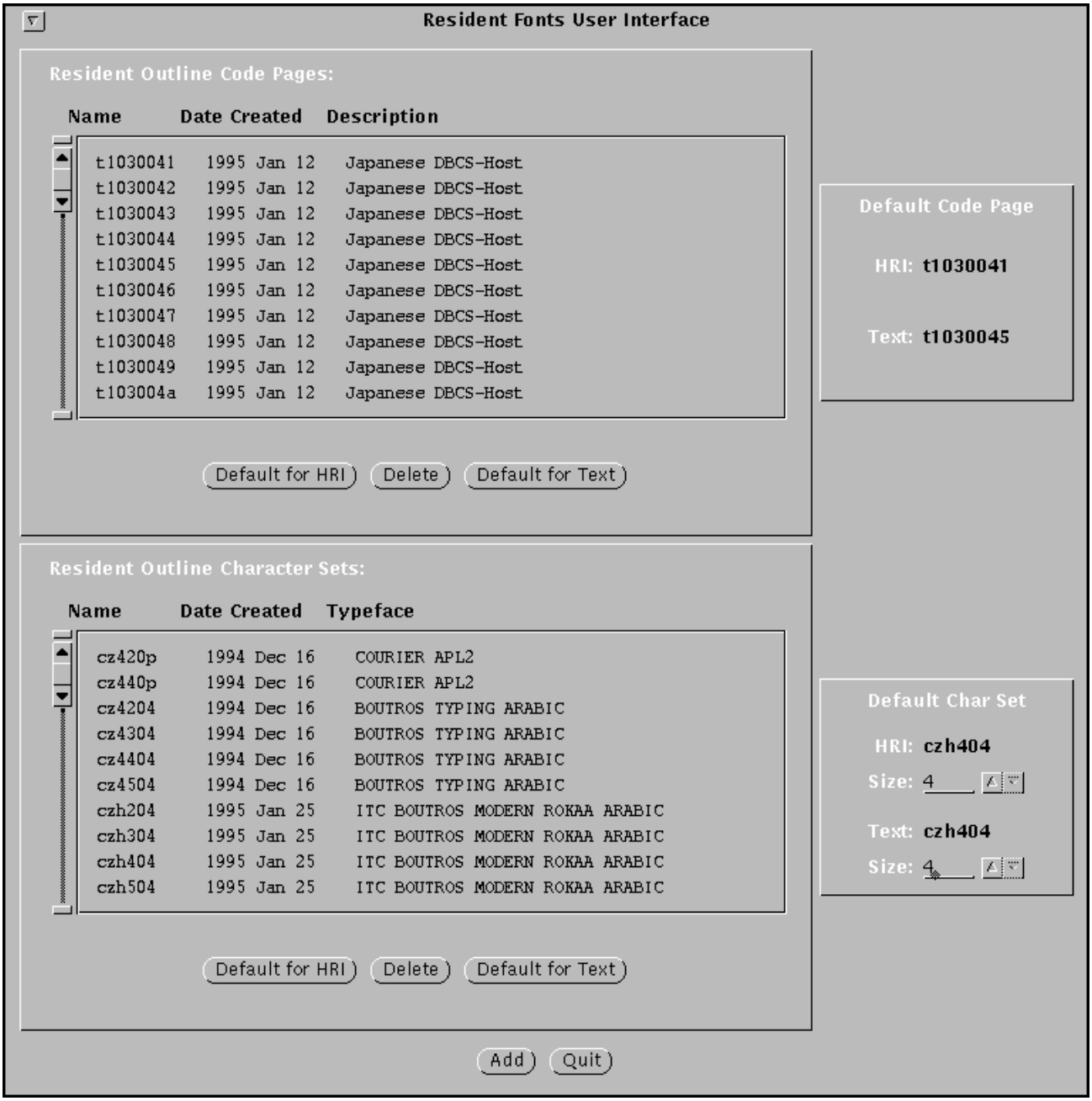
You can display the resident fonts currently loaded on your system, or add resident fonts as needed.

Displaying resident fonts

To display the currently loaded resident fonts, select Resident Fonts from the Configuration pull-down menu.

The Resident Fonts User Interface window displays.

Figure 3-7. **Resident Fonts User Interface window**


Resident Fonts User Interface
Resident Outline Code Pages:
Name Date Created Description
t1030041 1995 Jan 12 Japanese DBCS-Host
t1030042 1995 Jan 12 Japanese DBCS-Host
t1030043 1995 Jan 12 Japanese DBCS-Host
t1030044 1995 Jan 12 Japanese DBCS-Host
t1030045 1995 Jan 12 Japanese DBCS-Host
t1030046 1995 Jan 12 Japanese DBCS-Host
t1030047 1995 Jan 12 Japanese DBCS-Host
t1030048 1995 Jan 12 Japanese DBCS-Host
t1030049 1995 Jan 12 Japanese DBCS-Host
t103004a 1995 Jan 12 Japanese DBCS-Host
Default for HRI
Delete
Default for Text
Default Code Page
HRI: t1030041
Text: t1030045
Resident Outline Character Sets:
Name Date Created Typeface
cz420p 1994 Dec 16 COURIER APL2
cz440p 1994 Dec 16 COURIER APL2
cz4204 1994 Dec 16 BOUTROS TYPING ARABIC
cz4304 1994 Dec 16 BOUTROS TYPING ARABIC
cz4404 1994 Dec 16 BOUTROS TYPING ARABIC
cz4504 1994 Dec 16 BOUTROS TYPING ARABIC
czh204 1995 Jan 25 ITC BOUTROS MODERN ROKAA ARABIC
czh304 1995 Jan 25 ITC BOUTROS MODERN ROKAA ARABIC
czh404 1995 Jan 25 ITC BOUTROS MODERN ROKAA ARABIC
czh504 1995 Jan 25 ITC BOUTROS MODERN ROKAA ARABIC
Default for HRI
Delete
Default for Text
Default Char Set
HRI: czh404
Size: 4
Text: czh404
Size: 4
Add
Quit

Adding resident fonts

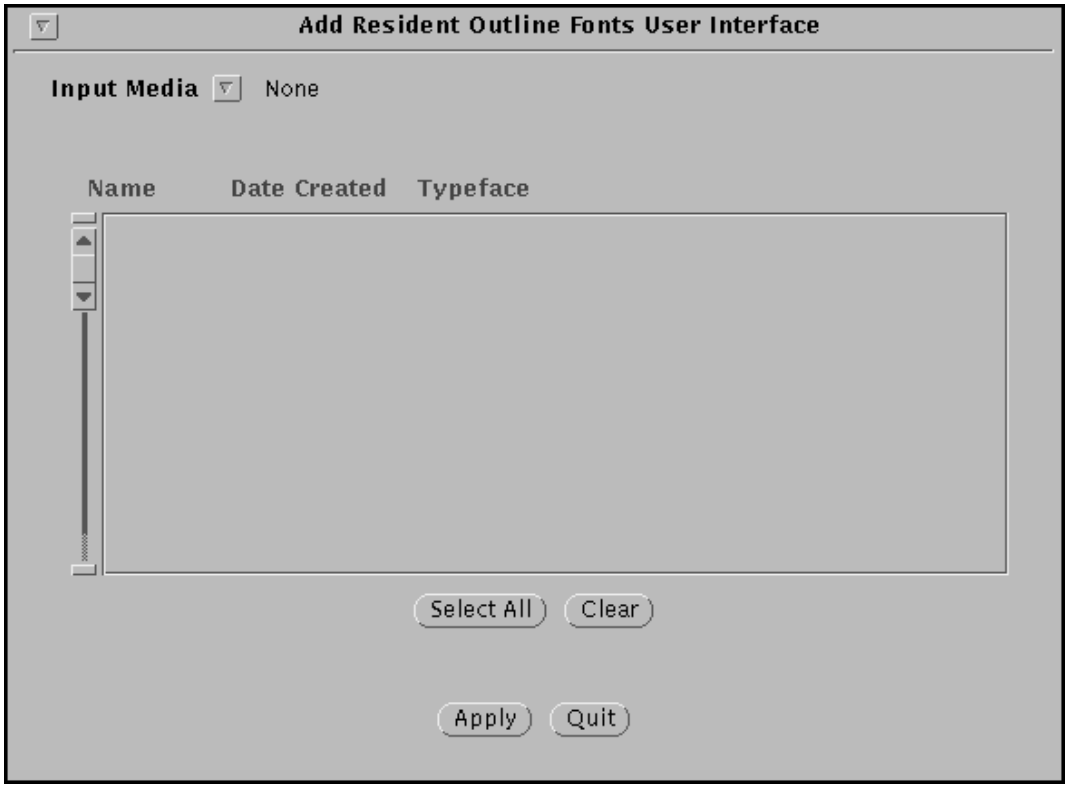
You can add resident fonts from various media including CD-ROM, diskette (floppy), or your network. To add resident fonts to your system, follow these steps:

1. If the fonts you want to add reside on a CD or a diskette, skip this step. Otherwise, copy the fonts to the following location:

   /var/db/fonts/input

2. Display the Resident Fonts User Interface window. (Refer to the section “Displaying resident fonts” above.)
3. Click Add. The Resident Outline Fonts User Interface window displays.

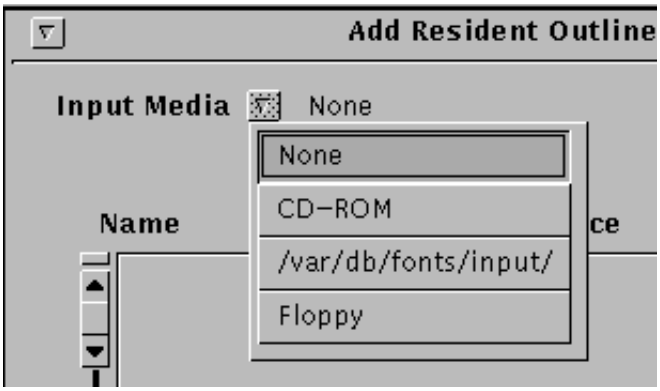
Figure 3-8. **Resident Outline Fonts User Interface window**



4. If using a CD-ROM or a diskette (floppy) as the source for the additional fonts, insert the CD-ROM or the diskette into the appropriate drive.

5. From the Input Media pull-down menu, select the medium you want to use as the source for the additional fonts. The fonts available on the selected medium display.

Figure 3-9. **Input Media pull-down menu**



6. From the displayed list of fonts, either select individual fonts to add, or click Select All to select all listed fonts.
7. Click Apply.
8. When loading of the new fonts is completed (that is, the Apply button is no longer grayed out), click Quit.
9. (Optional) Specify the default code page:
    a. Select a font to use as the default code page for Human Readable Information (HRI), then click the Default for HRI button on the top portion of the screen.
    b. Select a font to use as the default code page for Text, then click the Default for Text button on the top portion of the screen.
10. (Optional) Specify the default character set size:
    a. Select a font to use as the default character set for HRI, then click the Default for Text button on the bottom portion of the screen.
    b. Select a font to use as the default character set for Text, then click the Default for Text button on the bottom portion of the screen.

Loading the IPS software license text string

When an IPS system is purchased, the new owners must have a license authorizing them to use the IPS operating system software. Your license is obtained for you by your Xerox service representative, and must be enabled on the Printer Controller for your IPS to receive data from the host.

For you to obtain authorization to use the IPS software, a licensed text string of 20 characters, provided by Xerox, must be entered at the Printer Controller. Initially, your license may be for 90 days. At the end of this period, you receive a "permanent" license.

To obtain the license string from Xerox, follow the steps below to find out the host ID on the Sun.

1. Open a Unix command tool, using this procedure:
   a. Click the right mouse button on the blue user interface screen background to display the workspace pull-down menu.
   b. Select **Command Tool** from the workspace menu.
   c. When the command tool window opens, click inside it with the left mouse button.
2. Enter **hostid** to display your host ID.
3. Contact Xerox with the host ID, and follow further instructions.

Note: The license string entry procedure is performed only once, unless you receive a new license string, or load a new version of the IPS software.

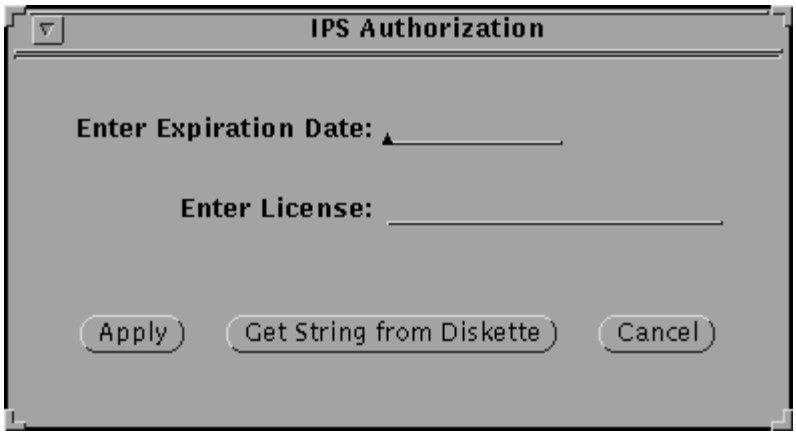
Any time you start the system before your software license is enabled, the Printer Controller boots up in Disabled mode. This means the IPS cannot receive data from the host and therefore cannot print. To enable printing, you must enter your license text string via windows accessed from the Administration pull-down menu.

1. From the Administration pull-down menu, select IPS Authorization.

Figure 3-10. **Administration pull-down menu**

The IPS Authorization window displays.

Figure 3-11. **IPS Authorization window**



2. On the Enter Expiration Date line, enter the license expiration date provided by your service representative. Make sure to enter the date exactly the way your service representative gives it to you (same number of characters, same letters in lower case, etc.) Any differences will cause your entry to be rejected.
3. On the Enter License line, enter the 20-character license text string provided by your service representative (in upper case). Here is an example of a license string:

   CB1ED0F1D80EEE534335

4. Click Apply when finished.

Note: If a message pops up, indicating that an invalid license was entered, your license string text entry was not accepted. Repeat steps 1 through 4, making sure you are entering the string correctly—all uppercase letters, etc. If your license string is rejected again, consult your service representative.

If your license string entry was valid, a message displays in the IPS Console window, indicating that the license was loaded. Your system will become authorized in about 30 seconds.

Alternatively, you may load the license string from a diskette:

1. Click the Get String from Diskette button. Make sure that the diskette containing the string is loaded in the diskette drive.
2. Follow the screen prompts to load the license string.

Switching modes (Dual Mode)

The Dual Mode printing option lets you switch back and forth between IPS and NPS modes on your Printer Controller. This allows your printer to accept IPDS, PostScript, and PCL data streams.

When you are in IPS mode, you can spool PostScript and PCL data streams in the background; however, you can print these jobs only when you switch to NPS mode. When you are in NPS mode you cannot spool IPDS data streams in the background; you can print them only when you are in IPS mode.

IPS mode to NPS mode

To switch from IPS mode to NPS mode:

1. Check the Control Unit Status field on the IPS main window to verify that the printer is Idle (not printing or receiving data).
2. Drain the printer at the host (this stops the host from sending jobs from the queue). Follow procedures for your own host system.
3. At the host, take the printer offline.
4. Place the pointer on the background area of the screen (not in a window or on an icon) and click the right mouse button.
5. From the menu that displays, select Start Network Printing. After a few minutes the Printer Controller switches to NPS mode.

Caution: Do not select Restart and do not turn the Printer Controller or the printer off and on.

NPS mode to IPS mode

To switch from NPS mode to IPS mode:

1. While the printer is idle, enter the command **list documents** at the >PS prompt and verify that no print jobs are pending or being received.
2. Place the pointer on the background area of the screen (not in a window or on an icon) and click the right mouse button.
3. From the menu that displays, select Start IPS Printing.

Caution: Do not select Restart and do not turn the Printer Controller or the printer off and on.

4. Put the printer online at the host.
5. Start the printer at the host.

4. Setting the system configuration

This chapter describes the procedures for configuring your system. You access those procedures through the pull-down menus on the IPS main window. The procedures are described in sequence as they appear on each menu.

Note: During an upgrade to the system, all data on the system disks is deleted. Therefore, it is important to save the following system configurations:

- Channel settings
- Resolution
- Channel address
- Channel mode
- Printer firmware revision
- Pages between updates
- Customer profile file.

For information on saving system configurations, refer to the section “Backing up and restoring configuration files” later in this chapter.

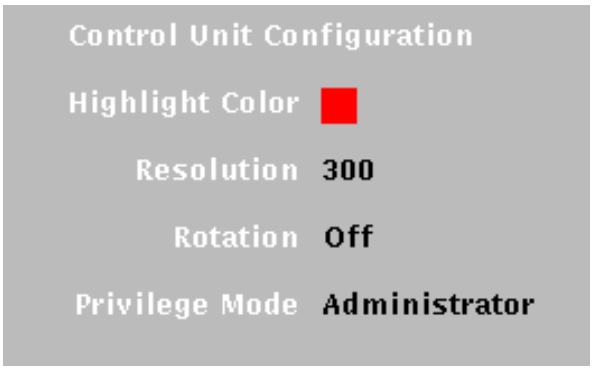
Privilege Modes

The IPS allows access to various functions based on a user's privilege level. The following Privilege Modes are available:

- **User Mode** — This is the default and the lowest privilege mode at which the IPS operates. In this mode, the Configuration menu, service-related options on the Diagnostics menu, as well as the Trace, Service, and Debug Level options on the Diagnostics menu are not accessible.
- **Operator Mode** — In this mode, service-related options on the Configuration and Diagnostic menus, as well as the Trace and Debug Level options on the Diagnostics menu are not accessible.
- **Administrator Mode** — In this mode, service-related options on the Configuration and Diagnostic menus are not accessible.
- **Service Mode** — In this mode, all functions are accessible.

A user's current Privilege Mode displays on the Control Unit Configuration section of the main window.

Figure 4-1. **Control Unit Configuration section of main window**

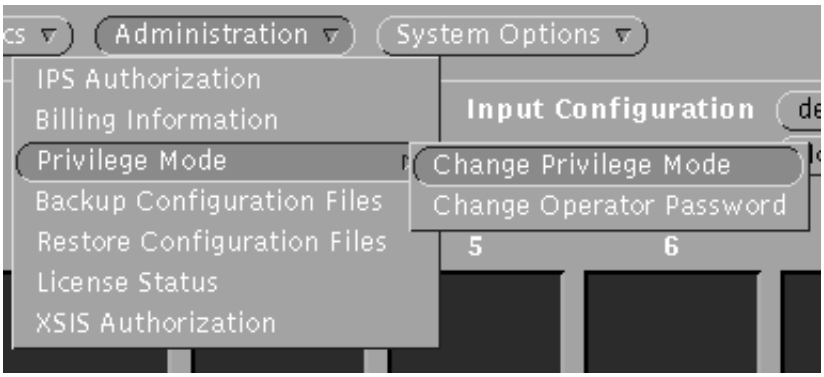


Changing the Privilege Mode

Changing your current privilege level to an Operator Mode, Administrator Mode, or Service Mode requires a password.

To change the Privilege Mode:

1. From the Administration menu, select Privilege Mode, then Change Privilege Mode.



The Change Privilege Mode window displays.

2. From the Privilege Mode pull-down list, select the Privilege Mode of your choice.
3. In the Enter Password field, enter your password.
4. Click Apply.

Changing the password for a Privilege Mode

To change the password for a Privilege Mode (Operator or Administrator):

1. From the Administration menu, select Privilege Mode, then Change Operator Password. The Change Operator Password window displays.

2. In the Old Password field, enter your old password.
3. In the New Password field, enter your new password. A password may consist of digits, letters, punctuation and special characters. It may not use control characters.
4. In the Confirm Password field, reenter your new password.
5. Click Apply.

Note: If the old password or the confirmed password is invalid, a notice window will display.

Accessing configuration tasks

From the IPS main window, configure your system by selecting from the Configuration, Diagnostics, Administration, and System Options menus, and from the input and output configuration subwindows. Return to the IPS main window from each of the submenus or subwindows after you have made your selections.

For an illustration of the menus and subwindows available from the IPS main window, refer to the “Introduction to the graphical user interface” chapter.

Note: Access to certain menus and selections within a menu depend on the user’s privilege level. Refer to the section “Privilege Modes” for more information.

Caution: When you are using the mouse on the IPS main window, it is possible to delete the window by selecting **Quit** from the pull-down menu on the title bar. If this occurs, reboot the Sun workstation (refer to the “Starting and stopping the system” chapter for the rebooting procedure).

Configuration menu tasks

The following procedures can be accessed from the Configuration pull-down menu:

- Indicating the input resolution
- Specifying the maximum simplex value
- Specifying the extraction color for highlight color printing
- Rotating the page origin
- Specifying the media units
- Setting optional processing parameters.

Other Configuration menu items are discussed in the “Setting up the Printer Controller” chapter.

Indicating the input resolution

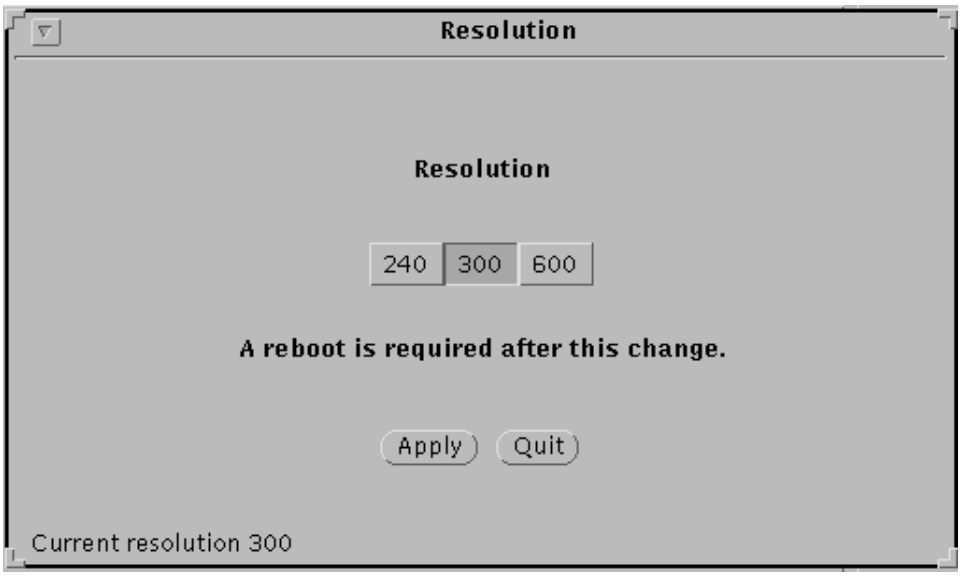
This section describes the procedure for communicating the resolution of the fonts used in the incoming job to the IPS. The IPS then reports this information to PSF.

Caution: The resolution you indicate on this window must match the font resolution in your host input data stream. Conflicts between the input font resolution and the IPS configuration may result in inability to print the job, or in blank output pages.

To indicate the resolution of fonts and other input resources:

1. From the Configuration menu, select Resolution. The Resolution window displays.

Figure 4-2. **Resolution window**



2. Click the resolution of the input resources.
3. Click Apply.
4. Drain the printer at the host. (Follow procedures for your host system.)
5. Reboot the Printer Controller.
6. Restart the PSF printer session, or the Functional Sub System.

Specifying the maximum simplex value

This section describes the procedure for specifying the number of simplex pages that the system prints in duplex mode before clearing the paper path and switching to simplex mode. This capability allows you to switch between duplex and simplex mode within a single job, with less degradation to the throughput speed.

When the IPS is printing in duplex mode and encounters a simplex page, the system may need to clear the paper path of all duplex sheets before changing to simplex mode. This clearing process may delay throughput. You can postpone this clearing process by printing simplex pages in duplex mode and specifying the number of pages, after which the system changes to simplex mode. Until the number of simplex pages you specify is sent, any simplex pages are printed in duplex mode with a blank page on the back, thus providing the appearance of simplex.

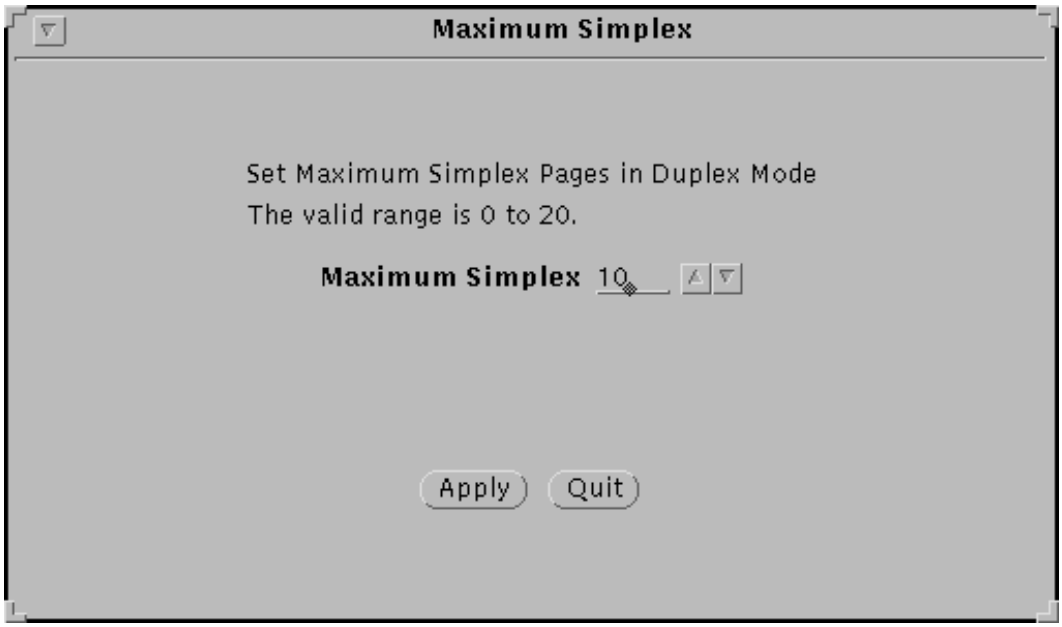
Note: When you print simulated simplex, the blank back pages are counted as billable pages by the billing meter.

Note: The print engine also performs simulated simplex independent of the IPS system controller. Blank back pages created by the print engine are not counted as billable pages by the billing meter. The print engine performs simulated simplex when the job changes plex every six pages or less.

To specify the maximum number of simplex pages to be printed in duplex mode:

1. From the Configuration menu, select Maximum Simplex. The Maximum Simplex window displays.

Figure 4-3. **Maximum Simplex window**



2. Enter the value for the maximum number of simplex pages you want printed in duplex mode and press <ENTER>, or click the arrows to select the value. The range of values is 0 to 20 pages. The default is 10; the recommended value is 10.

For jobs that contain such high frequency of plex changes, it is recommended that the Maximum Simplex value be set to 0. This allows the print engine to perform simulated simplex without charging for the blank pages.

Note: Ideally, this value should be set to the number of dead cycles required to clear the printer's paper path.

3. Click Apply.

Specifying the extraction color for highlight color printing

When the DocuPrint 4850/4890 IPS receives a color job, it prints it in whatever color of ink is loaded in the printer, using solid color and a variety of shades (color plus black) and tints (color plus white).

Extraction color specifies how the existing color of text, shading, or graphics contained in a job will print on your DocuPrint 4850/4890 IPS printer, and which color will print in the solid highlight ink color. All colors other than the highlight (printer ink) color print in a shade or tint of the color loaded in the printer.

The IPDS data stream allows eight colors to be specified in a job:

1. Red
2. Green
3. Blue
4. Cyan
5. Magenta
6. Yellow
7. Brown
8. Black.

However, the DocuPrint 4850/4890 IPS printer has available a different set of ten highlight color inks plus black that can be selected for loading in the printer: red, green, blue, cyan, magenta, royal (blue), ruby, cardinal (red), violet, and brown. Therefore, a job may specify a color for which the DocuPrint 4850/4890 IPS does not have a corresponding ink; or you may wish to print the job in an ink different from what is specified.

Note: Solid black is not affected by the extraction color selection; if specified in the job, it always prints as solid black.

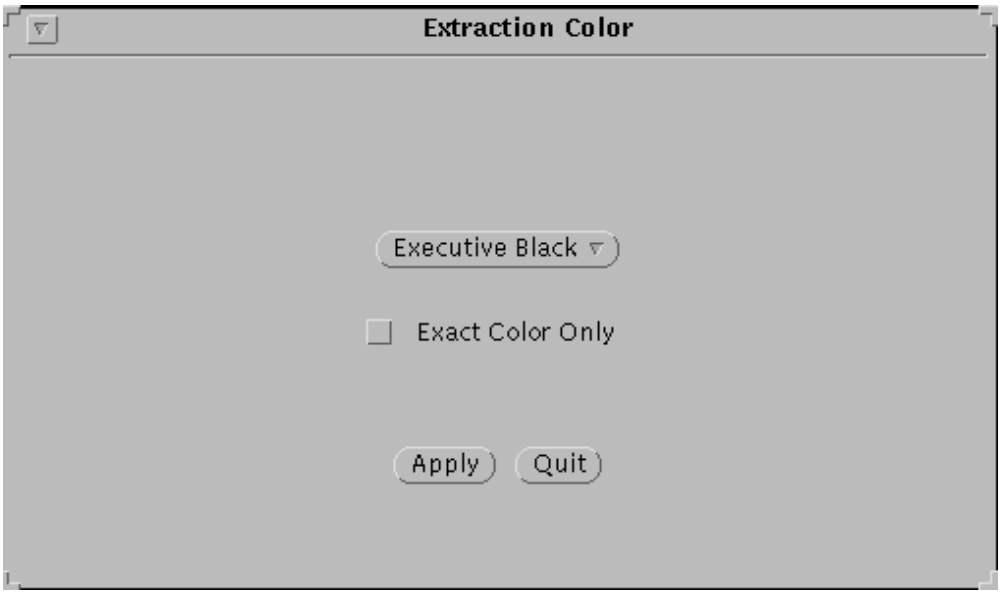
Note: The system requires extra processing to apply shading to data, when the data uses a color other than the one set as the extraction color. Therefore, jobs that use a large amount of these colors may cause performance degradation. For example, a job that uses a large amount of green will print faster when the extraction color is set to Green (or "Printer Color" with green ink is loaded in the printer), than when the extraction color is set to Red.

Extraction Color window

The Extraction Color window contains the following options:

- **Color pull-down menu —** Lists the eight colors allowed by the IPDS data stream, from which you select the extraction color.
  - — The **Printer Color** option selects whatever color ink is loaded in the printer as the extraction color.
  - — **Executive Black** selects black as the extraction color; that is, all colors specified in the job print as black or shades of black.
- **Exact Color Only —** If you click this option, only the extraction color prints as the solid or “pure” highlight color. All other colors in the job print as black.

Figure 4-4. **Extraction Color for Highlight Printing window**



Rules for extraction color

Here are some general rules for extraction highlight color on the IPS:

- The highlight color ink loaded in the printer always determines the final output color—it is impossible, for example, to obtain red text from green ink.
- Executive Black prints all non-black colors as black.
- Colors in the job that are different from the extraction color print as black when Exact Color Only is specified.

The following table summarizes the extraction color principles, using red, green, and blue as examples:

Color specified in job	Extraction color selected	Exact Color selected?	Printed color (output)
Red	Red	Yes	Printer ink color (solid)
All non-red (except black)	Red	Yes	Black
Red	Red	No	Printer ink color
Any non-red	Red	No	Shade/tint of printer ink color
Red	Green (or any non-red)	Yes	Black
Red	Green	No	Shade/tint of printer ink color
Any	Executive black	Yes or no	Black
Red	Printer Color (red)	Yes	Printer ink color (solid)
Red	Printer Color (red)	No	Printer ink color
Blue	Printer Color (red)	Yes	Black
Blue	Printer Color (red)	No	Shade/tint of printer ink color

Color samples

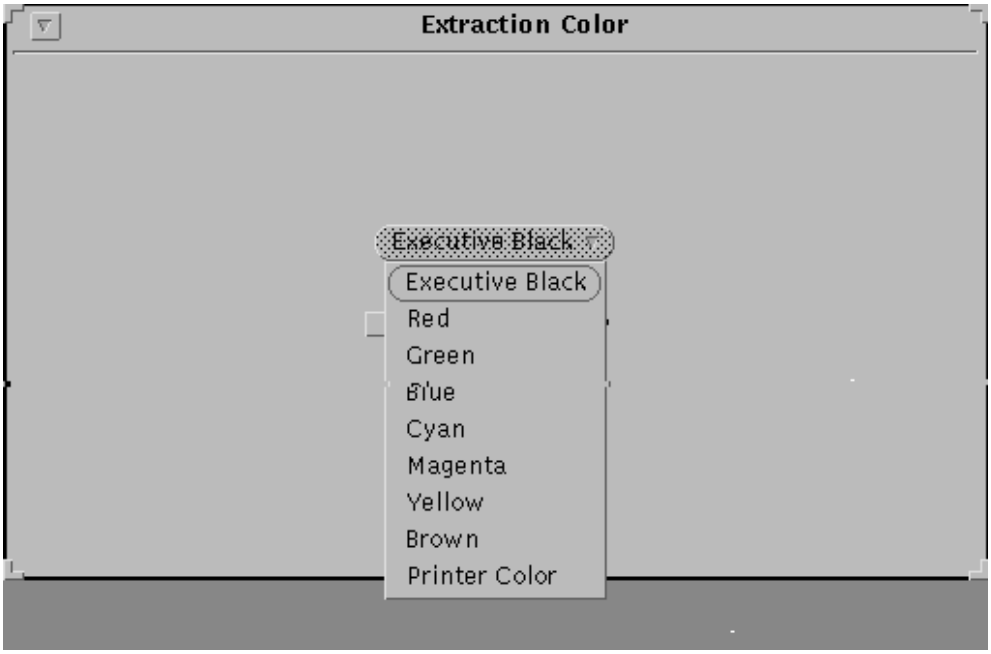
The “Extraction color samples” appendix in the *Xerox DocuPrint 4850/4890 IPS System Overview Guide* shows extractions for the inks available for your system. It shows approximately what shades, tints, and solids will be produced by the possible combinations of the printer inks, the job-specified colors, and the extraction colors.

Caution: These appendix pages show an approximation of the colors that your printer will produce; they are included to give you an idea of what to expect. However, the actual printed colors can vary from printer to printer. You should always run test prints to see exactly how your printer prints these colors.

Procedure To specify the extraction color:

1. From the Configuration menu, select Extraction Color. The Extraction Color for Highlight Printing window displays.
2. From the color pull-down menu, select your desired extraction color.

Figure 4-5. **Extraction Color window with color pull-down menu**



3. Select Exact Color Only if you want only the extraction color to print in the solid color of the ink loaded in the printer.
4. Click Apply.

Printing the IPS color samples

Your IPS has two sets of color palette trace files, stored in the **/var/db** directory on the Printer Controller. Each set contains one palette for each color of dry ink available for theDocuPrint 4850/4890 IPS. Appendix B of your *System Overview Guide* contains samples of both sets of printed palettes for each color ink.

Note: Each color file is applicable only to the corresponding color of dry ink that is installed in the printer.

Extraction color palettes

By printing the following palette files, you can see how the different color extractions affect the appearance of colored areas printed with each color of ink.

- blue_palette.trace
- brown_palette.trace
- cardinal_palette.trace
- cyan_palette.trace
- green_palette.trace
- magenta_palette.trace
- red_palette.trace
- royal_palette.trace
- ruby_palette.trace
- violet_palette.trace

Shades and tints palettes

The following palettes show the range of shades and tints that can be printed with each of the highlight color inks, and gives the percentages of color, black, and/or white that make up each one.

- blue2_palette.trace
- brown2_palette.trace
- cardinal2_palette.trace
- cyan2_palette.trace
- green2_palette.trace
- pink2_palette.trace (prints magenta)
- red2_palette.trace
- royal2_palette.trace
- ruby2_palette.trace
- violet2_palette.trace

Procedure for printing the palettes

You can print out these palette files, which are actually captured trace files, to find out how your particular IPS printer produces the various shades and tints of the color ink that is loaded. Use the procedure for executing a captured trace, as follows.

1. Make sure that the specified extraction color is the same as the color ink that is loaded in the printer. For palettes of colors that are not listed on the Extraction menu, substitute extraction colors as directed in “Setting the extraction color,” earlier in this chapter.
2. Select Trace Options from the Diagnostics pull-down menu on the IPS main window.
3. On the Trace Options window, click Offline.

4. From the Trace Mode pull-down menu, select Execute Trace. The Default Trace File Name prompt window displays.
5. On the Default Trace File Name window, enter the following path:

   /var/db/*palettename*

   where *palettename* is the file name of the palette you want to print (such as royal2_palette.trace).
6. Click Apply. The system prints ten copies of the specified palette.
7. After printing has completed, select Normal Operation from the Trace Options window.

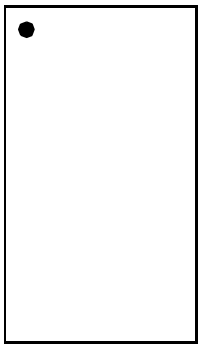
Rotating the page origin

If you want to print a job that was designed for a continuous forms printer, you can enable the job to print on the cut-sheet IPS printer by rotating its page origin 90 degrees. When you do this, the IPS *emulates* a continuous forms printer while printing on cut sheets.

Example: Suppose you wanted to print a continuous forms job designed for 17 by 11-inch (or possibly A3) paper on your IPS, which uses cut sheets.

- The page or text origin is always in the upper-left corner of the printed page.
- **For continuous forms printing**, the longest edge (17 inches) is the top edge. (See the illustration below.)

For cut-sheet printing, the short edge (11 inches) is the top edge. (See the illustration below.)

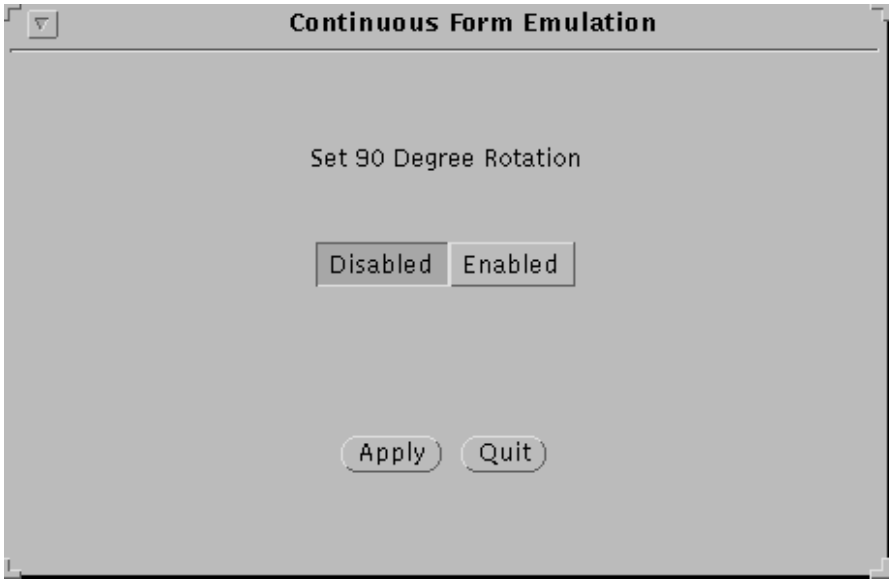


For the page to print correctly in portrait orientation on the IPS cut sheets, its text origin must be rotated 90^{o}, via the Continuous Forms Emulation window.

Follow these steps:

1. Select Continuous Forms Emulation from the Configuration pull-down menu.
2. On the Continuous Form Selection window, click Enabled.

Figure 4-6. **Continuous Form Selection window**



3. Click Apply.

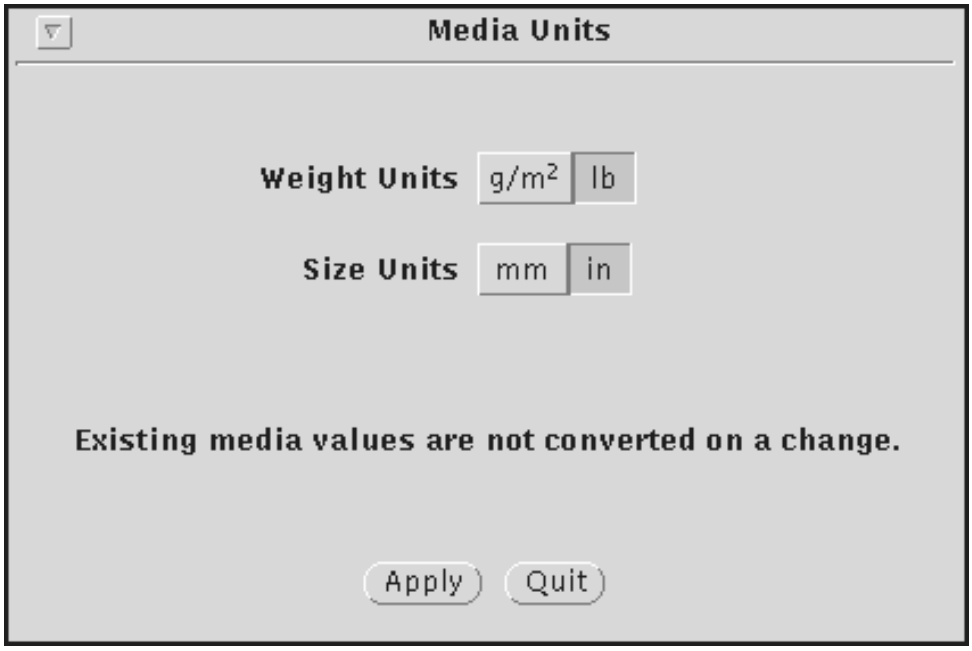
Specifying the media units

This section describes the procedure for specifying the media units you want to use for weight and size. The specified units are used on the IPS main window.

To specify the weight and/or size units:

1. From the Configuration menu, select Media Units. The Media Units window displays.

Figure 4-7. **Media Units window**



2. For weight, select **g/m^2** or **lb** as the desired units.
3. For size, select **mm** or **in** as the desired units.
4. Click Apply. A confirmation window displays.
5. Click OK to confirm your selections.

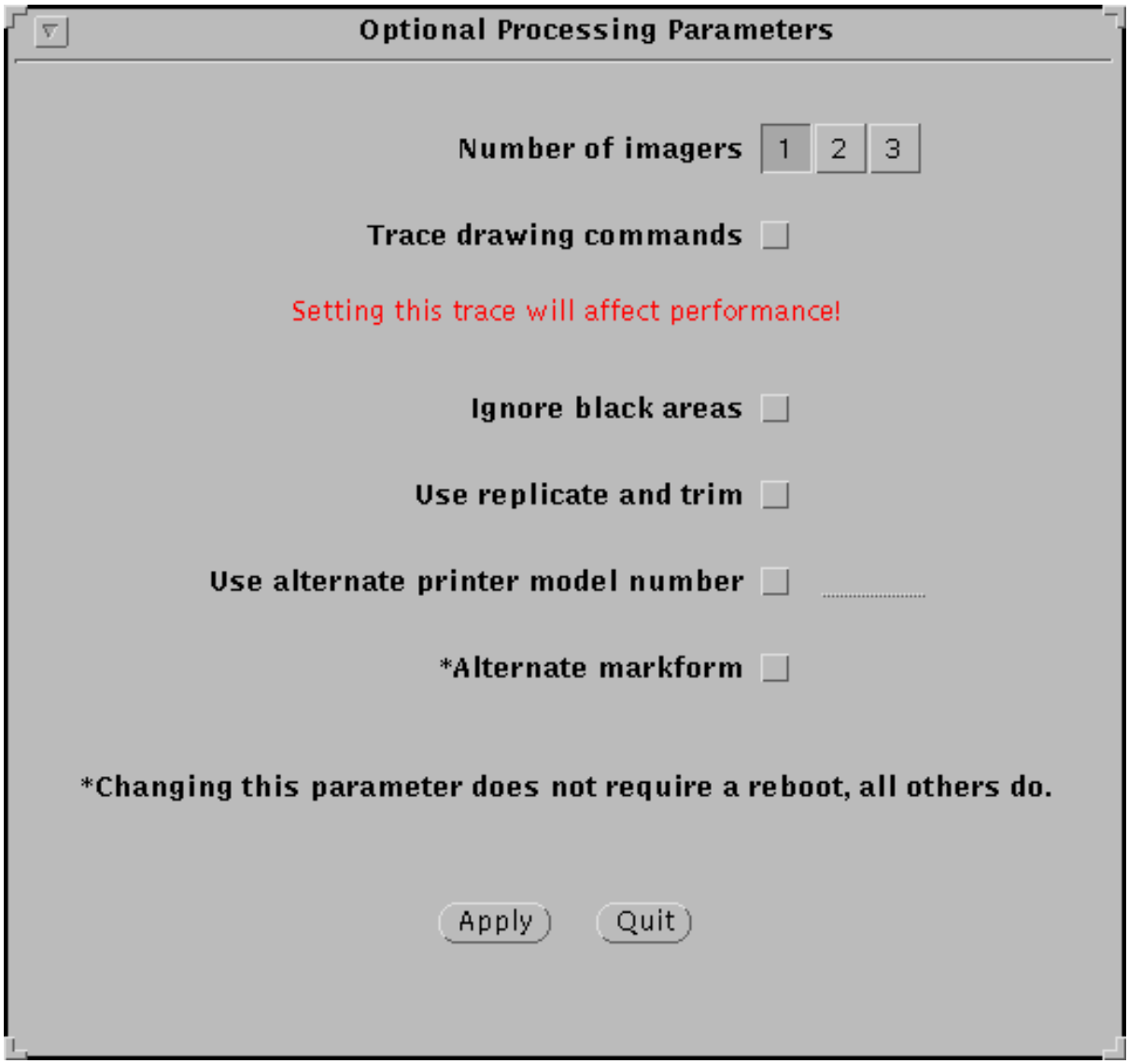
Setting optional processing parameters

You can set processing parameters for your system as follows:

1. Select Optional Processing Parameters from the Configuration pull-down menu.
2. On the Optional Processing Parameters screen (refer to the next page for an illustration), identify the parameters you want to set.
   - **Number of imagers** — Specifies how many imagers to run. An imager should be added for each CPU on the system.
   - **Trace drawing commands** — Enables or disables tracing of the IPDS commands sent from PSF. These commands result in drawing commands for the imagers.

     Checking this option will degrade performance.
   - **Ignore black areas** — Enables or disables the WCB option. This option removes large areas of black from IM images to save printer consumables.
   - **Use replicate and trim** — Enables or disables the Replicate and Trim option. This option is used to image large areas by using a small area pattern supplied by the host, and replicate the pattern to fill the large area in a tiling manner. Enabling this option reduces the transmission time for image data from PSF to the IPS printer. By default, this parameter should be enabled.
   - **Use alternate printer model number** — Specifies the printer model sent by the IPS printer to PSF during a Sense Type and Model (STM) response.
   - **Alternate Markform** — Enables or disables the Alternate Markform option. This option prints a printer specific mark on the end banner sheets. Enabling this option results in a Xerox logo. By default, this parameter is set to print a black bar on the end banner sheets.
3. For each parameter, select the checkbox and enter the information on the right, if applicable.
4. When all parameters are set, click Apply.

Figure 4-8. **Optional Processing Parameters window**



5. Reboot the system to put your settings into effect (except for "Alternate markform," which does not require a reboot.)

Diagnostics menu tasks

The following procedures can be accessed from the Diagnostics pull-down menu.

- Printing samples
- Capturing a trace
- Executing a captured trace
- Printing a trace file
- Setting of the debug level
- Updating the software using a diskette or a CD
- Updating the software remotely.

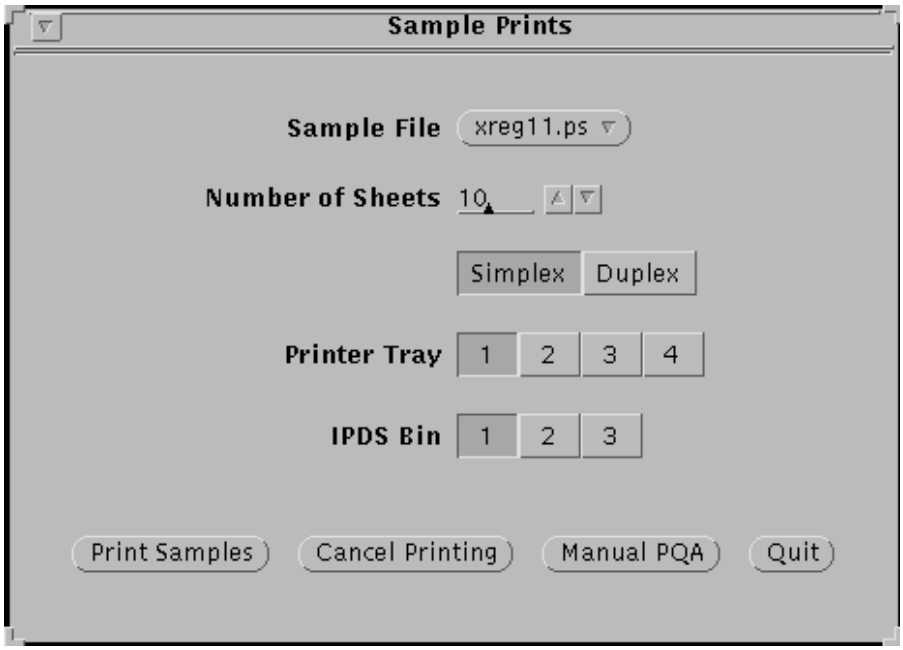
Printing samples

This section describes the procedure for setting up and printing sample files (test patterns).

To set up and print sample files:

1. From the Diagnostics menu, select Sample Prints. The Sample Prints window displays.

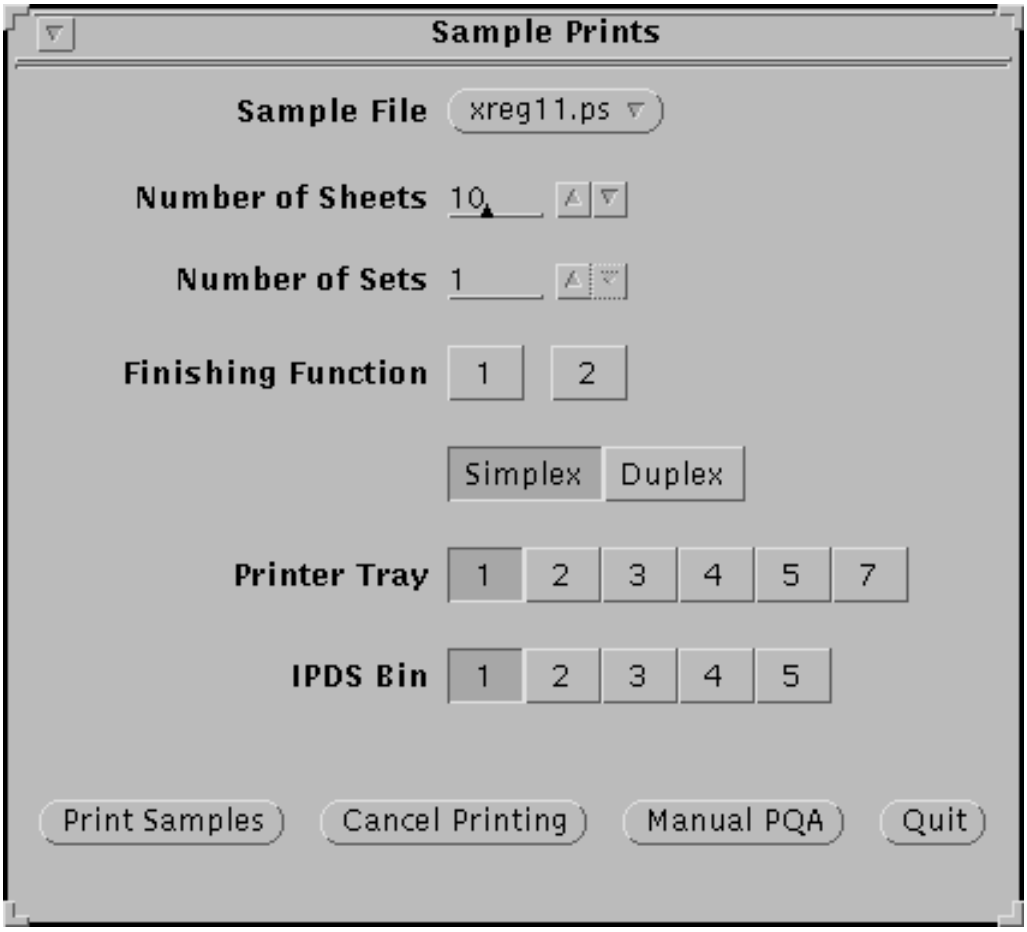
Figure 4-9. **Sample Prints window**



2. Specify the test pattern and the criteria you want to use to print the sample file.

Note: If your DocuPrint 4850/4890 IPS has DFA, the Sample Prints window contains two additional fields: **Number of Sets** and **Finishing Function**.

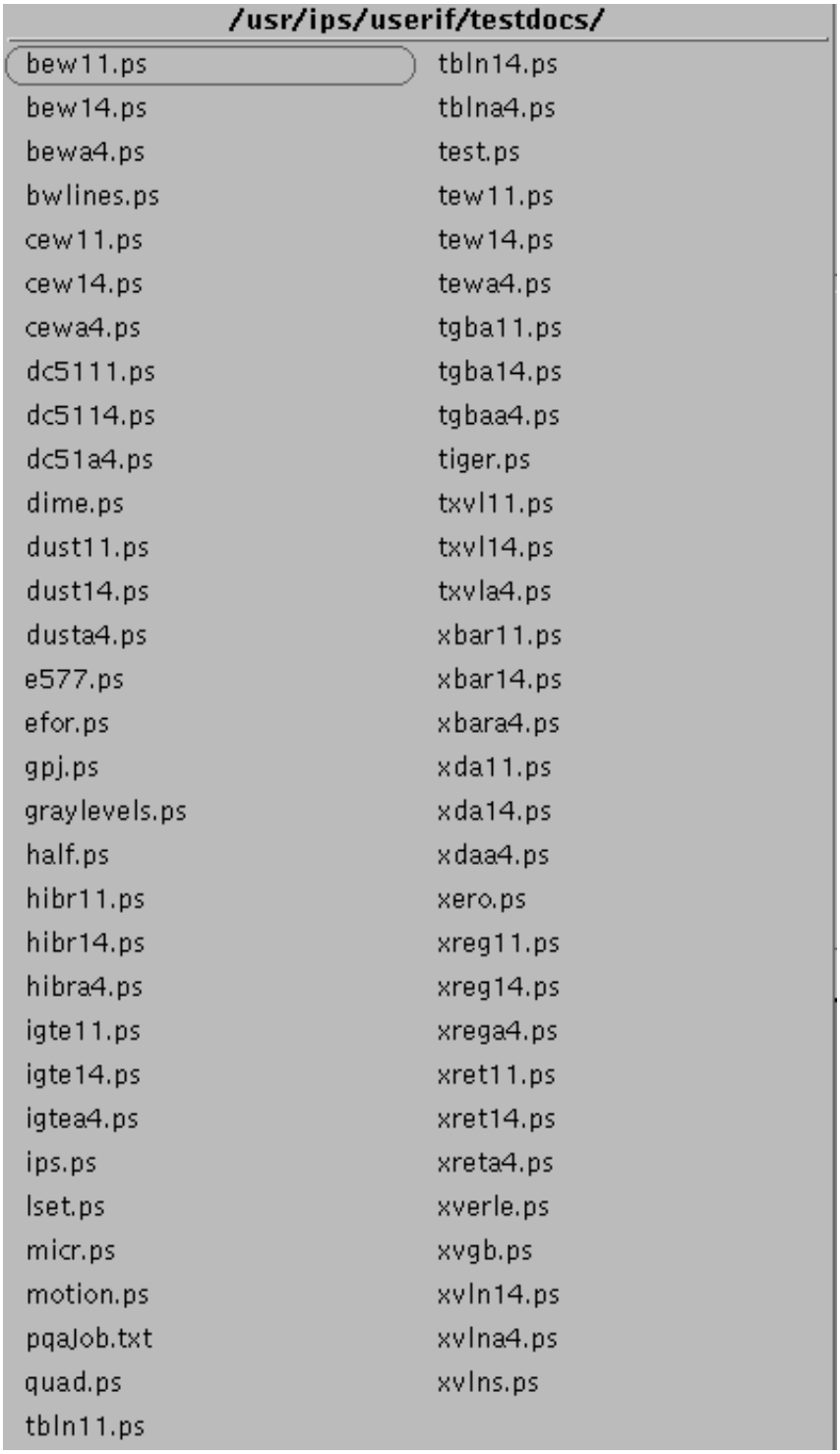
Figure 4-10. **Sample Prints window for the a system with DFA (shown is a DocuPrint 4635 IPS)**



- **Sample File** — Specifies the sample file you want to print. When you select this field, the Testdocs menu displays, allowing you to click the file you want to print.

Note: The following screen shows a sampling of the files that are available. Your system may have different sample files, or you may choose to have some added or deleted.

Figure 4-11. **Portion of Testdocs list of samples to print**



- **Number of Sheets —** Specifies the number of pages you want to print from the sample file. The range is 0 to 500 sheets. The default is 10 sheets.
- **Number of Sets (DFA systems only) —** Specifies the number sets to create, each containing the number of sheets specified.
- **Finishing Function Option (DFA systems only) —** Enables you to specify finishing functions 1 or 2 for a third-party finishing device, if desired.
- **Mode** — Specifies whether the sample is printed in simplex or duplex mode. Simplex is the default. If you select duplex, the same sample is printed on both sides of each sheet.
- **Printer Tray** — Specifies the input tray grouping from which paper will be fed. (Refer to the "Specifying the input configuration" section later in this chapter.)
- **Bin Group** — Specifies the output bin grouping to which the printed samples are sent. (Refer to the "Specifying the output configuration" section later in this chapter.)

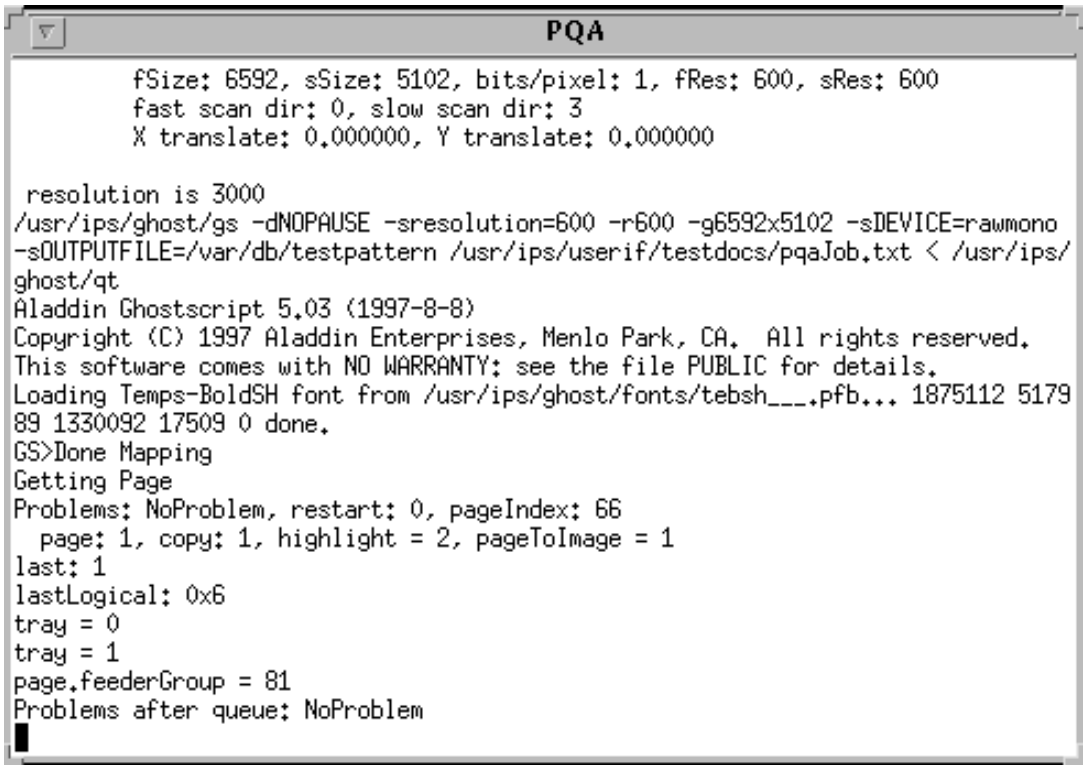
Note: If Bin 1 (sample tray) is not selected, the printed sheets are offset every six sheets.

3. Click Print Samples to initiate printing. Your samples are delivered to the bin group selected on the Sample Printing window.

Manual PQA button When you click this button, the system prints a one-page sample. This initiates an automatic print quality adjustment if needed.

While the PQA is in progress, a PQA status window displays, giving status messages on the adjustment. When the PQA is complete, the window disappears.

Figure 4-12. **PQA status window example**


PQA
fSize: 6592, sSize: 5102, bits/pixel: 1, fRes: 600, sRes: 600
fast scan dir: 0, slow scan dir: 3
X translate: 0.000000, Y translate: 0.000000
resolution is 3000
/usr/ips/ghost/gs -dNOPAUSE -sresolution=600 -r600 -g6592x5102 -sDEVICE=rawmono
-sOUTPUTFILE=/var/db/testpattern /usr/ips/userif/testdocs/pqaJob.txt < /usr/ips/
ghost/qt
Aladdin Ghostscript 5.03 (1997-8-8)
Copyright (C) 1997 Aladdin Enterprises, Menlo Park, CA. All rights reserved.
This software comes with NO WARRANTY: see the file PUBLIC for details.
Loading Temps-BoldSH font from /usr/ips/ghost/fonts/tebsh___.pfb... 1875112 5179
89 1330092 17509 0 done.
GS>Done Mapping
Getting Page
Problems: NoProblem, restart: 0, pageIndex: 66
page: 1, copy: 1, highlight = 2, pageToImage = 1
last: 1
lastLogical: 0x6
tray = 0
tray = 1
page.feederGroup = 81
Problems after queue: NoProblem

Note: Setting the extraction color to a color other than black will help the printer to initialize the “adjusting color” process during a PQA.

Capturing and executing a trace

This section describes the procedures you use to initiate a trace to perform system diagnostics and to execute a trace. In general, the service representative performs this function. However, you may be asked to perform this task in preparation for a service call. Your service representative will provide a password, because this function is password-protected.

Capturing a trace

To capture a trace in preparation for a service call:

1. Drain the printer at the host. (Follow procedures for your host system.)
2. Restart the Printer Controller by selecting Restart from the Sun workstation background menu. (Refer to the “Rebooting the Printer Controller” section in the “Starting and stopping the system” chapter for this procedure.)
3. From the Diagnostics menu, select Trace Options (available to Administrator and Service privilege mode users only). The Trace window displays.

Figure 4-13. **Trace window with Online Trace Mode Options menu displayed (for a system with TCP/IP interface)**

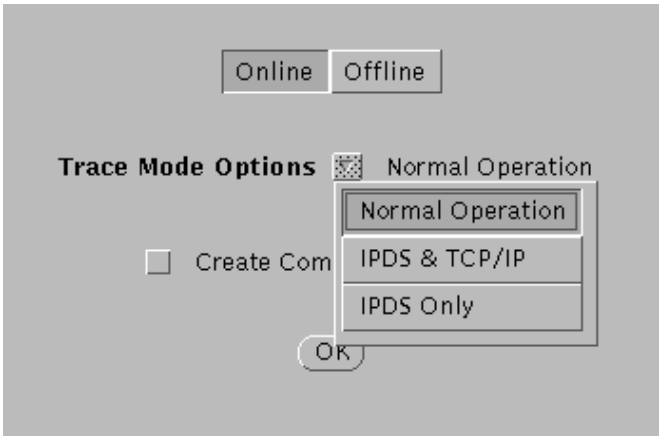
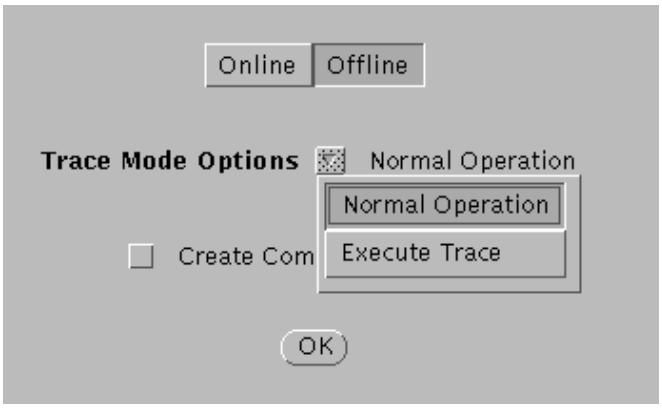


Figure 4-14. **Trace window with Offline Trace Mode Options menu displayed**



The Trace window contains the following options and field:

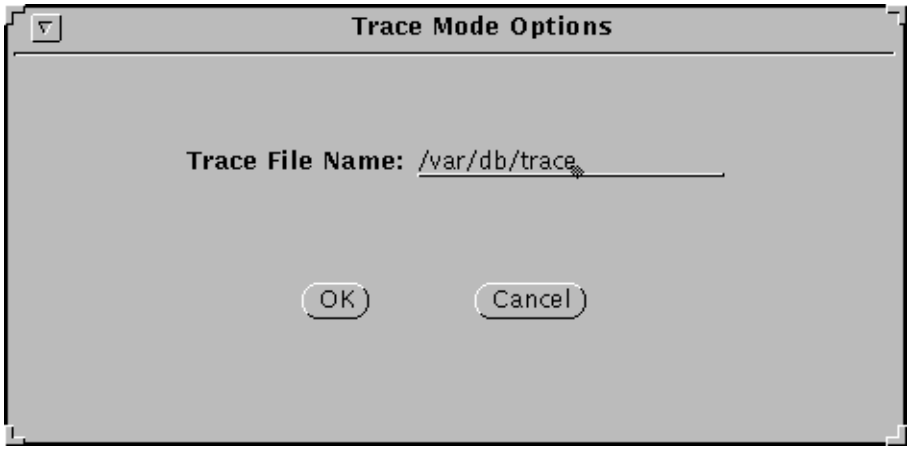
- **Online** — Enables the interface after you execute the trace.
- **Offline** — Disables the interface so that you can execute the trace.
- **Trace Mode Options pull-down menu** — Specifies how you want to perform the trace. You use the pull-down menu to specify the trace options you want to use. The selections are as follows:
  - — **Normal Operation** — Specifies no trace options are in effect.
  - — **IPDS and Channe**l — Specifies that the trace will capture the channel command words (exchanged between the host and the printer and the IPDS data stream) into the trace file.

    Note: This option displays only if “Channel” was selected from the Interface window. (Refer to the “Setting up the Printer Controller” chapter.)
  - — **IPDS & TCP/IP** — Specifies that the trace will capture the TCP\IP commands (exchanged among the host and the printer and the IPDS data stream) into the trace file.

    Note: This option displays only if “TCP/IP” was selected from the Interface window. (Refer to the “Setting up the Printer Controller” chapter.)
  - — **IPDS Only**—Specifies that the trace will capture only the IPDS data stream into the trace file.
  - — **Execute Trace** — Specifies that the job will print as though it was received across the channel or the TCP/IP interface.

4. From the Trace Mode Options pull-down menu, select IPDS & Channel, IPDS only, or IPDS & TCP/IP. Your selection is displayed in the lower right corner of the Trace Mode Options window, and the Trace Mode Options window displays.

Figure 4-15. **Trace Mode Options window**



5. Enter a name for the trace file. You can enter the full directory path along with the file name to save the trace file directly to a desired location. If no file name or file path is specified, the file is saved as *Trace* and stored in the **/var/db** directory.

Note: It is recommended that the trace file name start with **`trace`**_, followed by the name of the trace, all in lower case characters. For example, if the trace name is test, enter the following as the file name:

trace_test

Note: The trace file is a large file and can quickly fill up a directory. For that reason, the default **/var/db** directory is the recommended place to store trace files.

6. Click OK to start the trace.
7. Start the printer at the host.
8. Send a job to the IPS. The trace runs on this job. (The throughput speed of the job when running in Trace Mode is slower than in normal operation.)
9. Select Normal Operation from the Trace Options pull-down menu.
10. Click Quit.

Executing a captured trace

To execute a trace to assist with system diagnostics:

1. Capture the trace, following the steps described in the section “Capturing a trace” above.
2. Select Trace Options from the Diagnostics pull-down menu on the main window.
3. Click Offline to disable the interface.
4. From the Trace Mode pull-down menu, select Execute Trace. The Default Trace File Name prompt window displays.
5. If you have already given the trace file a name during the capturing process, that name is displayed on this screen.

   If you were not capturing a trace file, or if you want to execute a trace file different from the one just captured, enter the name on the line provided in the Default Trace File Name window.
6. Click Apply. The job prints. After the job has completed, the system returns to normal operation.
7. After the job has completed, select Normal Operation.
8. Click Online to enable the interface.
9. Click Quit.

Note: After executing a trace file, make sure to cancel the FSS and restart IPS before submitting any jobs. Otherwise, the output of any submitted jobs may be missing all of the text data.

Printing a trace file

You can print a trace file using the conprt utility as follows:

1. After capturing the trace and verifying its effects by using the "Execute trace" option from the Trace Mode pull-down list, open a Unix command tool.
2. Change the working directory by entering:

   cd /var/db
3. Process the trace file using the ipdeb utility by entering:

   ipdeb trace > trace_debug (for uncompressed files) or

   ipdeb trace.Z > trace_debug (for compressed files)

   This creates the file trace_debug that will be an English rendition of the hex data.

Note: The ipdeb utility supplies default values for those parameters that are not supplied. The defaults are:

- Paper size: USLetter (8.5 by 11-inch)
- Resolution: -r 300
- Directory: current directory.

To print a file from a directory other than the current directory, specify the directory as a separate field following the file name.

4. To print the trace file on a DocuPrint 4850/4890 IPS in duplex, enter:

   conprt -d trace_debug [/var/db]

   where /var/db is the directory, and is optional.

Note: The conprt utility determines whether to specify mono or hilite for the -c option.

Note: If you are using a paper size other than USLetter (8.5 by 11-inch), specify the dimensions of the paper in pels by using the -x option. For example, for A4 paper on a DocuPrint 4850/4890 IPS enter:

conprt -d -x 3520x2480 trace_debug [/var/db]

Note: Do not use the conprt utility with large files because each page of a text file requires about 1 MB of disk space.

Setting of the debug level

You can set the level of debug messages to be stored in log message files. To set the debug level:

1. From the Diagnostics menu, select Debug Level. The Debug Level window displays.

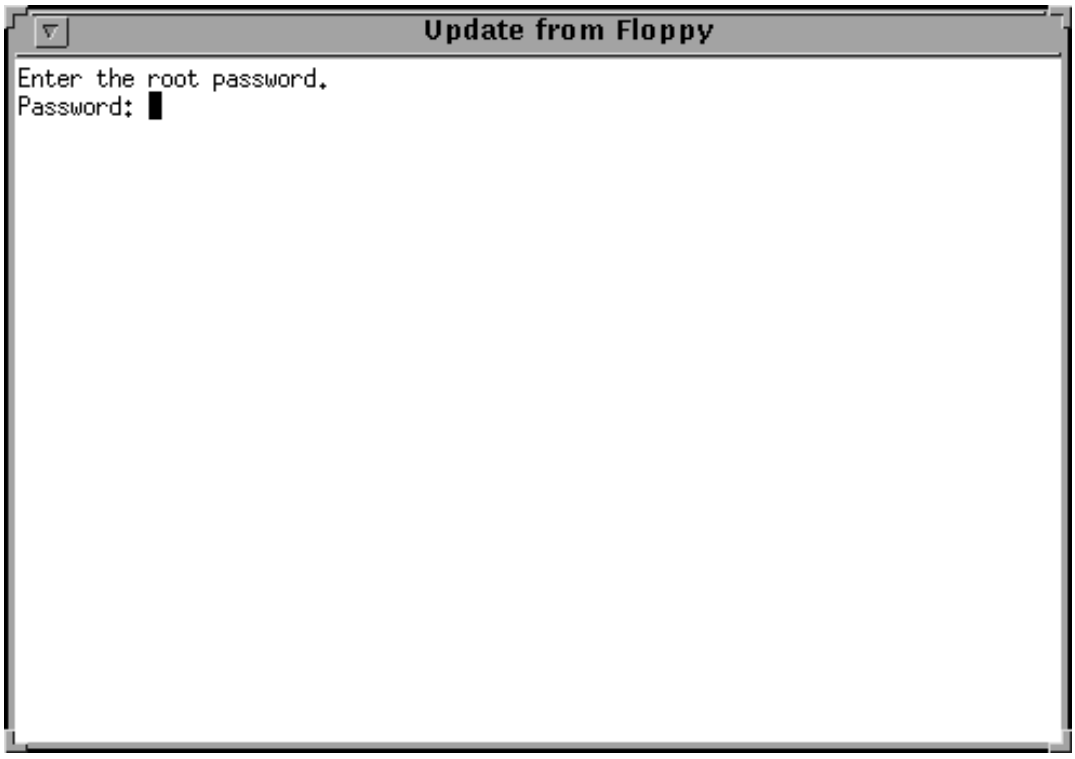
2. Select the debug level of your choice.
3. Click Apply.

Note: Selecting a Debug Level other than 0 or selecting Save Pages to Disk For Viewing may degrade throughput speed.

Updating the software using a CD or a diskette

You can update the printing system software using a CD or a diskette, provided by your service representative. To update the software:

1. Insert the CD or the diskette containing the software update into your diskette drive.
2. From the Diagnostics menu, select Update from CDROM or Update from Floppy. The Update from CD or the Update from Floppy window displays.



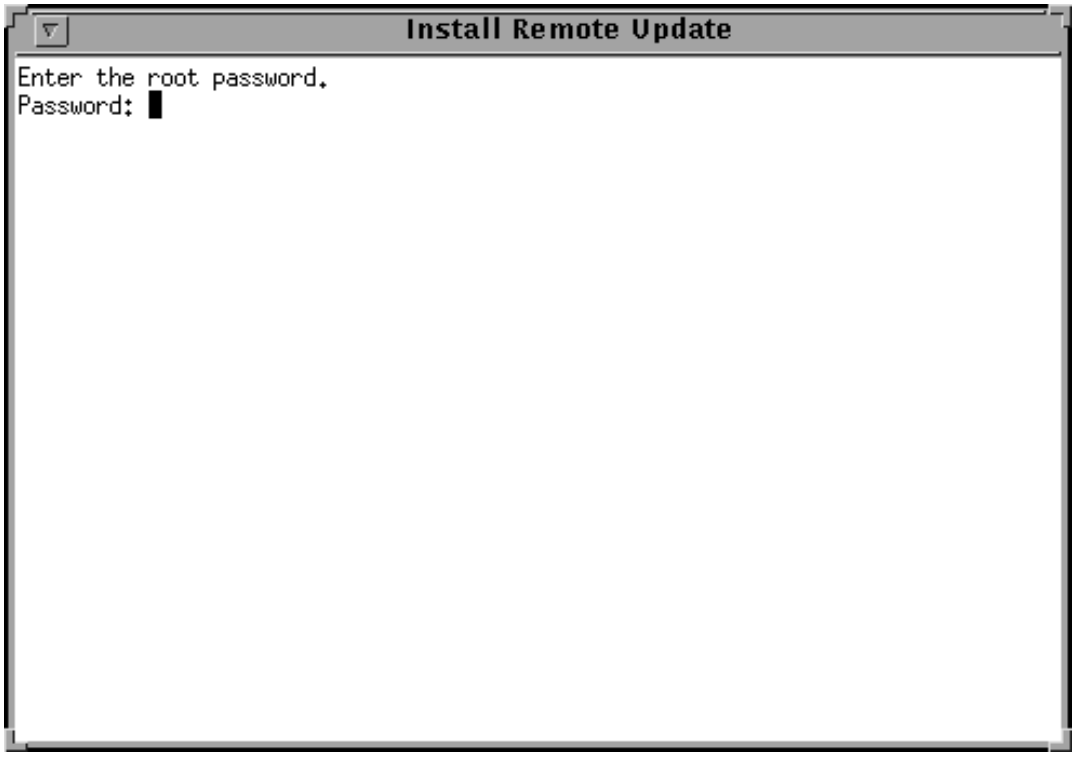
3. Enter the password provided by your service representative.

The software will automatically load from the CD or from the diskette onto your system.

Updating the software remotely

You can update the printing system software remotely as follows:

1. From the Diagnostics menu, select Install Remote Update. The Install Remote Update window displays.



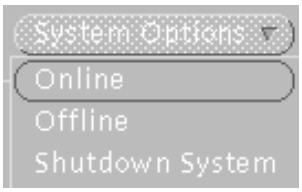
2. Enter the password provided by your service representative.

The software will automatically load onto your system.

System Options menu tasks

From the System Options pull-down window, you can access windows to place the IPS online and offline, and shut down the system.

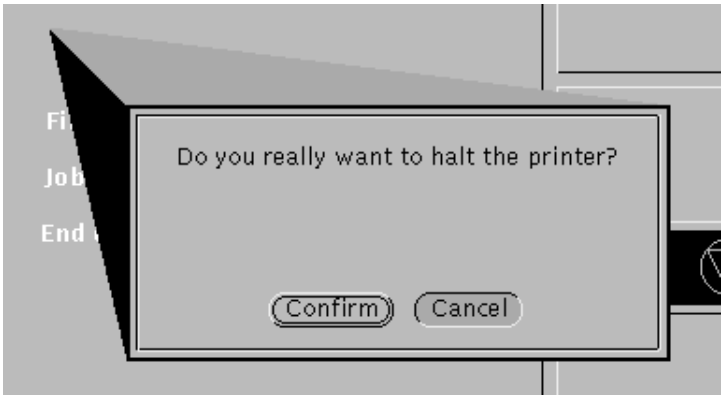
Figure 4-16. **System Options pull-down menu**



- **Online** — Places the system online.
- **Offline** — Takes the system offline.
- **Shutdown System** — Shuts down the system. This option stops all processes running on the Printer Controller, stops the printer, and returns to the boot prompt of the operating system.

  When selecting this option, you are asked to confirm your selection, as illustrated below.

Figure 4-17. **Shutdown confirmation window**



Note: The shutdown confirmation window displays in English only.

Specifying the input configuration

This section describes the procedures for creating, changing, and deleting input tray configurations; selecting the feeder tray(s) for a job; and indicating the media (stock) that is loaded in each feeder tray. (For an explanation of the buttons on these windows, refer to the "Buttons" section in the "Introduction to the graphical user interface" chapter.)

When you specify the input configuration, you associate one or more feeder trays with each IPDS tray that is called for in a print job. The printer then feeds paper from all the printer trays specified for a given IPDS tray. It stops and requests more paper only when all those trays are empty.

You can create input configurations by organizing the stocks you will use in a certain application or set of applications into unique groups with different paper trays. This allows the host to access different paper stock from each tray.

Note: When configuring feeder groups, the printer feeds from any of the feeder trays in the group, with no particular order to follow. In other words, the printer will not necessarily start with the lowest numbered tray in the group.

By placing media icons in the IPDS and Printer Tray cells on the Input Configuration window, you communicate to the printer which feeder trays to use for each IPDS tray the data stream specifies. At the same time, you are setting up the Main window input section to display the stock loaded in each printer tray.

Example of an input configuration

Here is an example of a hypothetical input configuration you might create:

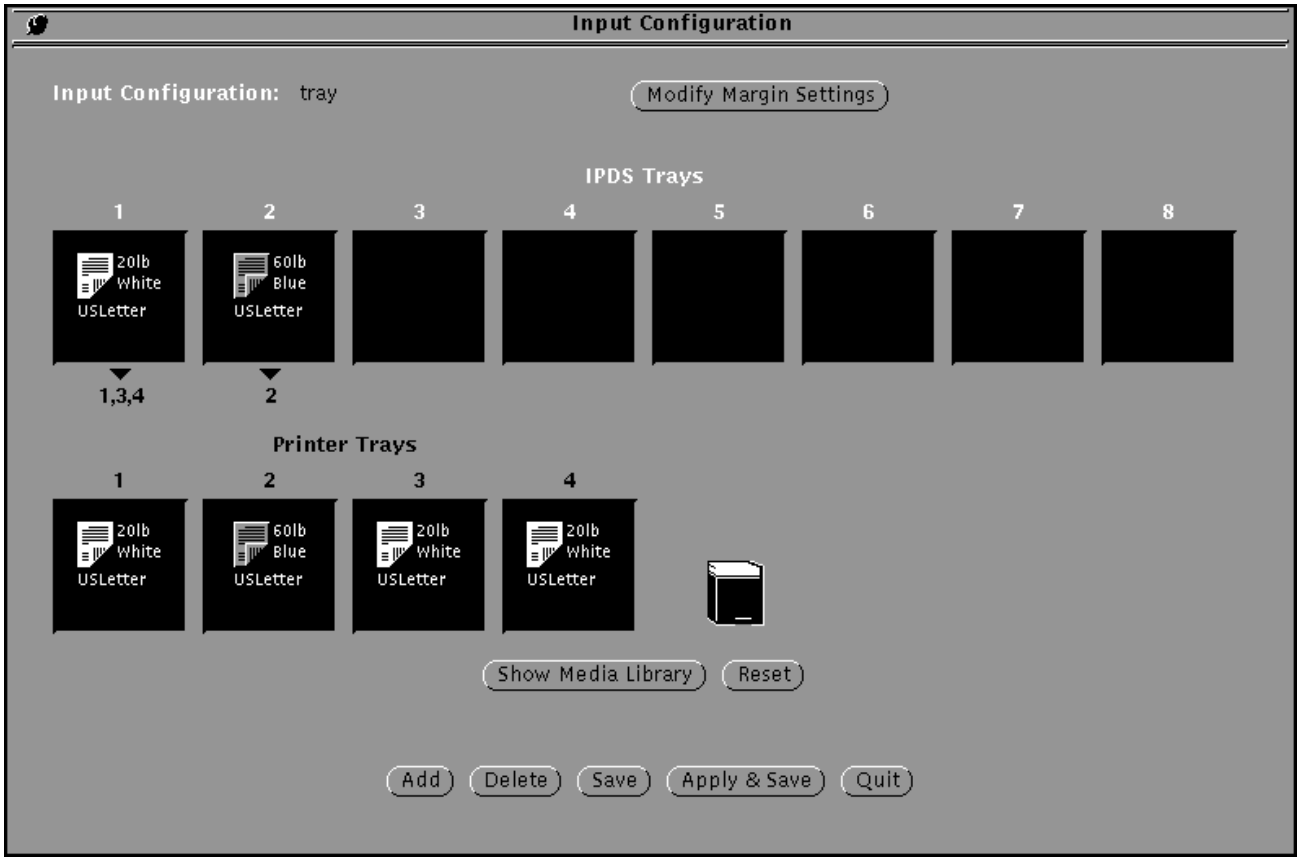
You have an application in which only IPDS trays 1 and 2 are called out, with most of the job calling for IPDS tray 1. The media you will be using are 20-pound white USLetter and 60-pound blue USLetter. You have a high-capacity feeder and would like to use all four available trays.

To accomplish this, you could create a configuration like this:

- In the IPDS Trays row, specify the 20-pound white stock in the IPDS Tray 1 cell and the 60-pound blue in the IPDS Tray 2 cell.
- In the Printer Trays row, specify the 20-pound white paper in the cells for Printer Trays 1, 3, and 4.
- Specify the 60-pound blue paper in the Printer Tray 2 cell only, because a relatively small amount of that stock will be required.

The following figure shows the configuration described above.

Figure 4-18. **Example of an input configuration, displayed on the IPS main window**



By invoking this configuration, you ensure your job will print as follows (be sure the physical printer trays actually contain the stock you specified):

- The IPS will feed from printer tray 1 for all parts of the job in which IPDS tray 1 is specified in the data stream. These pages will be printed on the 20-pound white paper.

- When tray 1 is empty, feeding will switch to tray 3, then tray 4, without any intervention from the operator. Printing will not stop until trays 1, 3, and 4 are empty. (These pages will continue to be printed on the 20-pound white paper.)
- For those parts of the job in which IPDS tray 2 is specified, feeding switches to printer tray 2. Those pages will be printed on the 60-pound blue card stock.

Selecting simplex or duplex printing

The 4850/4890 IPS allow you to switch from simplex to duplex printing (or vice versa) within and between print jobs.

Duplex or mixed plex jobs need to be printed from IPDS trays with duplex icons. Jobs that need to print in simplex only, such as label stock or transparencies, should be printed from IPDS trays with simplex icons. Refer to the section “Creating a media icon” later in this chapter for information on how to create simplex and duplex printing icons.

Note: For the 4050/4090, 4850/4890, and DP92C IPS, the systerm must clear the paper path before each plex change. (The 96/4635/180 IPS does not do this.) Performance is affected to some extent for all printers at each plex change. The degree to which performance is affected depends on whether or not the paper path is cleared and on the number of plex changes within the job.

To specify simplex or duplex printing, select an IPDS tray with the appropriate media icon, as shown below.

Figure 4-19. **Single (simplex) media icon**

Figure 4-20. **Single or double (simplex or duplex) media icon**

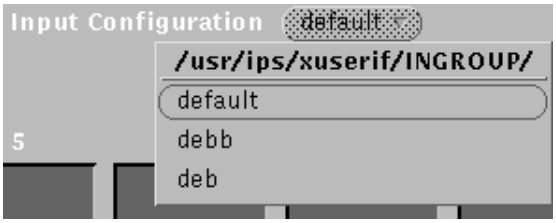
Setting up margin values

The IPS software allows you to save multiple margin settings by making the margin values part of the attributes of the IPDS trays. Also, each IPDS tray can be defined with different margin values.

To set the margin values of an IPDS tray, follow these steps:

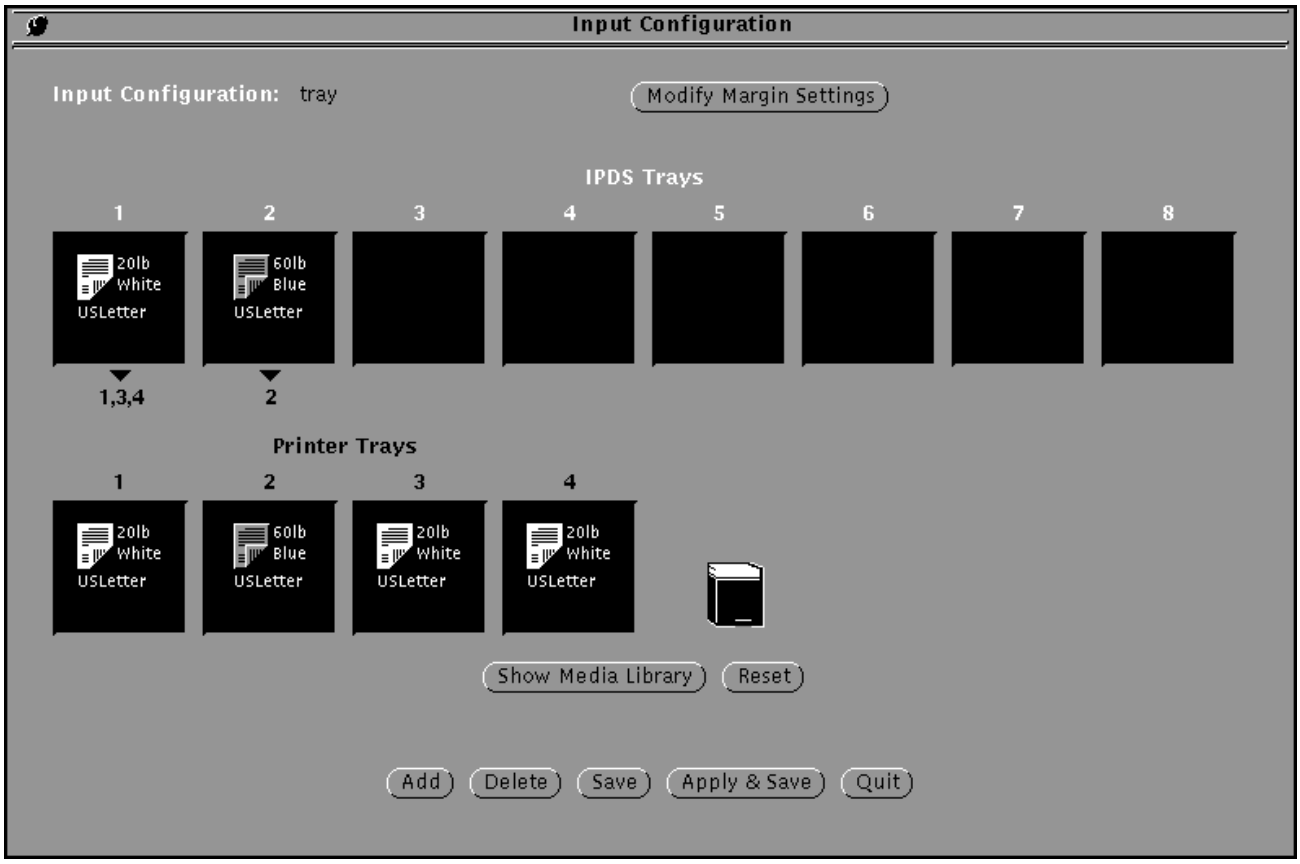
1. In the Input Configuration section of the main window, select the input configuration of your choice using the default pull-down menu.

Figure 4-21. **default pull-down menu**



The Input Configuration window displays.

Figure 4-22. **Input Configuration window**

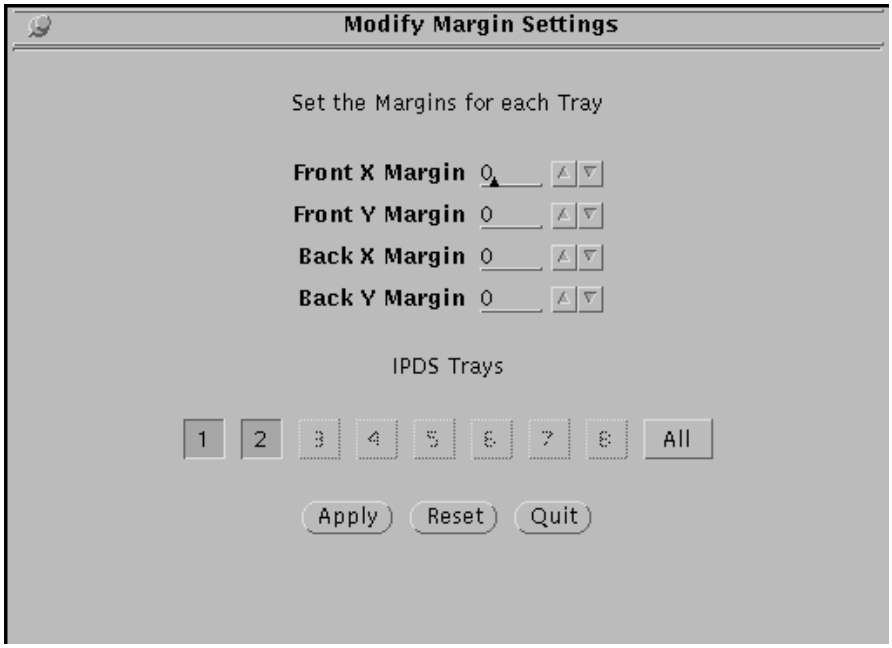


2. Click the Modify Margin Settings button.

3. From the Modify Margin Settings window, select one or more IPDS trays.

Note: The current margin values for the first IPDS tray selected displays.

Figure 4-23. **Modify Margin Settings window**



4. Change the margins to the desired values.
5. Click Apply.
6. Repeat steps 3 through 4 until all trays contain the desired values.
7. Click Quit.
8. From the Input Configuration window, click Apply and Save.
9. From the Input Configuration window, click Quit.

Setting up the Media Library

The Media Library is a virtual representation of the stocks (media) that you have available for loading in your IPS feeder trays. To create an input tray configuration, you copy (by dragging and dropping) media icons from this Library to the tray cells on the Input Configuration window. When you place icons for the same stock in an IPDS tray cell and a printer tray cell, the IPDS and printer trays are automatically mapped together.

When your IPS is first installed, your Xerox representative assists you in placing media icons in the Media Library for the stocks that you need for what will be your Default input configuration. If you will be using stocks in addition to those already in your Media Library, you must add them. You can create icons representing standard sizes, weights, form types (3-hole, etc.), and colors of stocks. In addition, you can create customized icons for non-standard media.

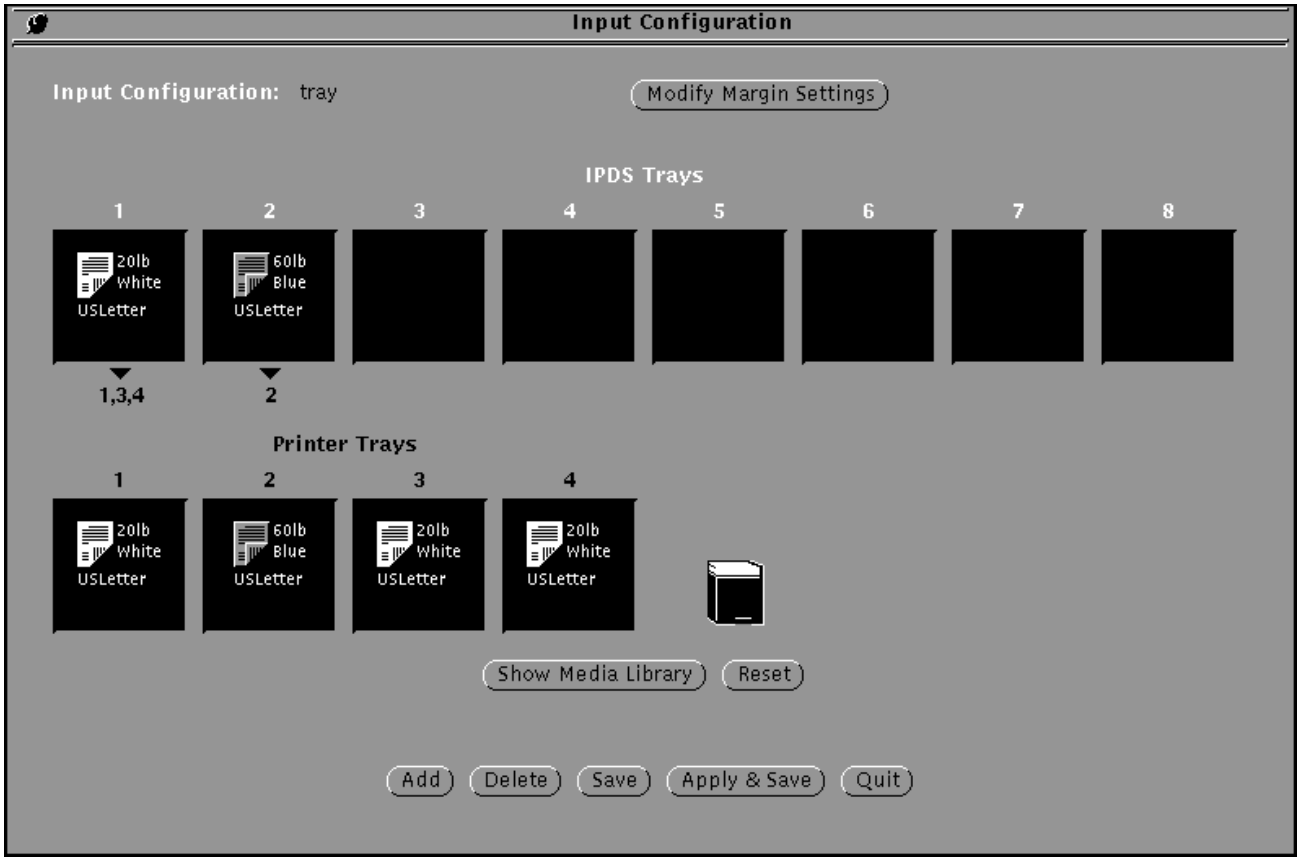
Creating a media icon

To create new icons for your Media Library, follow these steps:

1. In the Input Configuration section of the main window, using the default pull-down list, select the input configuration of your choice. The IPS Input Configuration window displays.

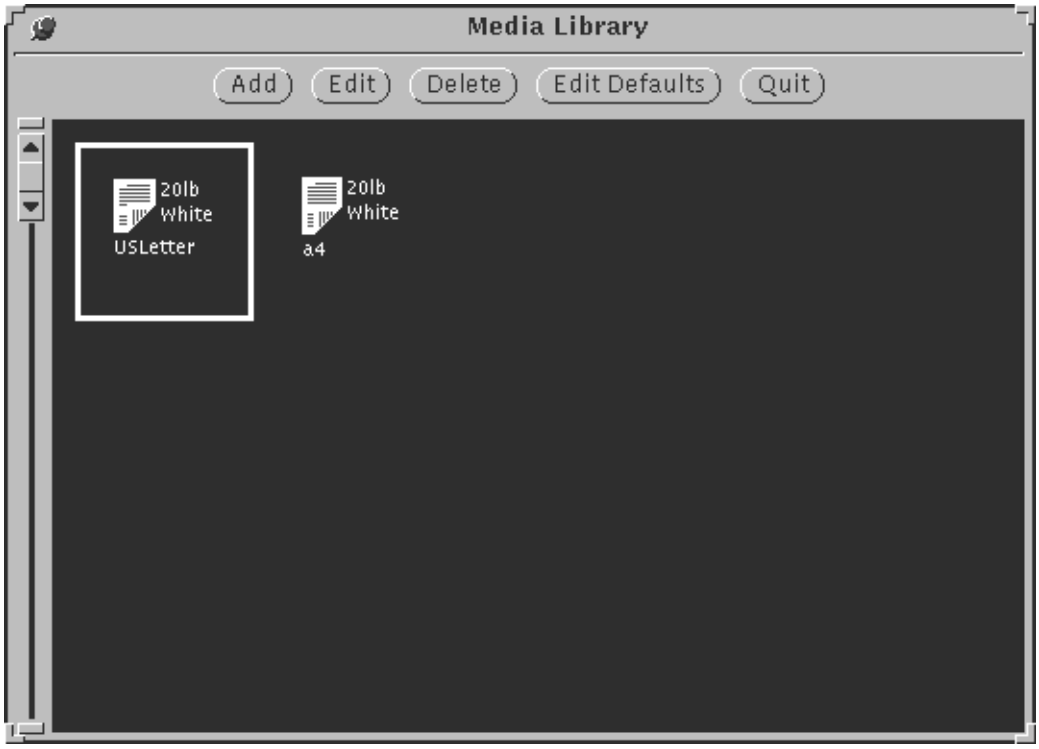
Note: The first time you see this window, it displays your Default input tray configuration, which your Xerox representative set up for you at installation. Subsequently, when you open this window it displays the current input configuration.

Figure 4-24. **IPS Input Configuration window**



2. Click the Show Media Library button, centered near the bottom of the window, below the row of Printer Trays cells. The Media Library window displays.

Figure 4-25. **Media Library window**

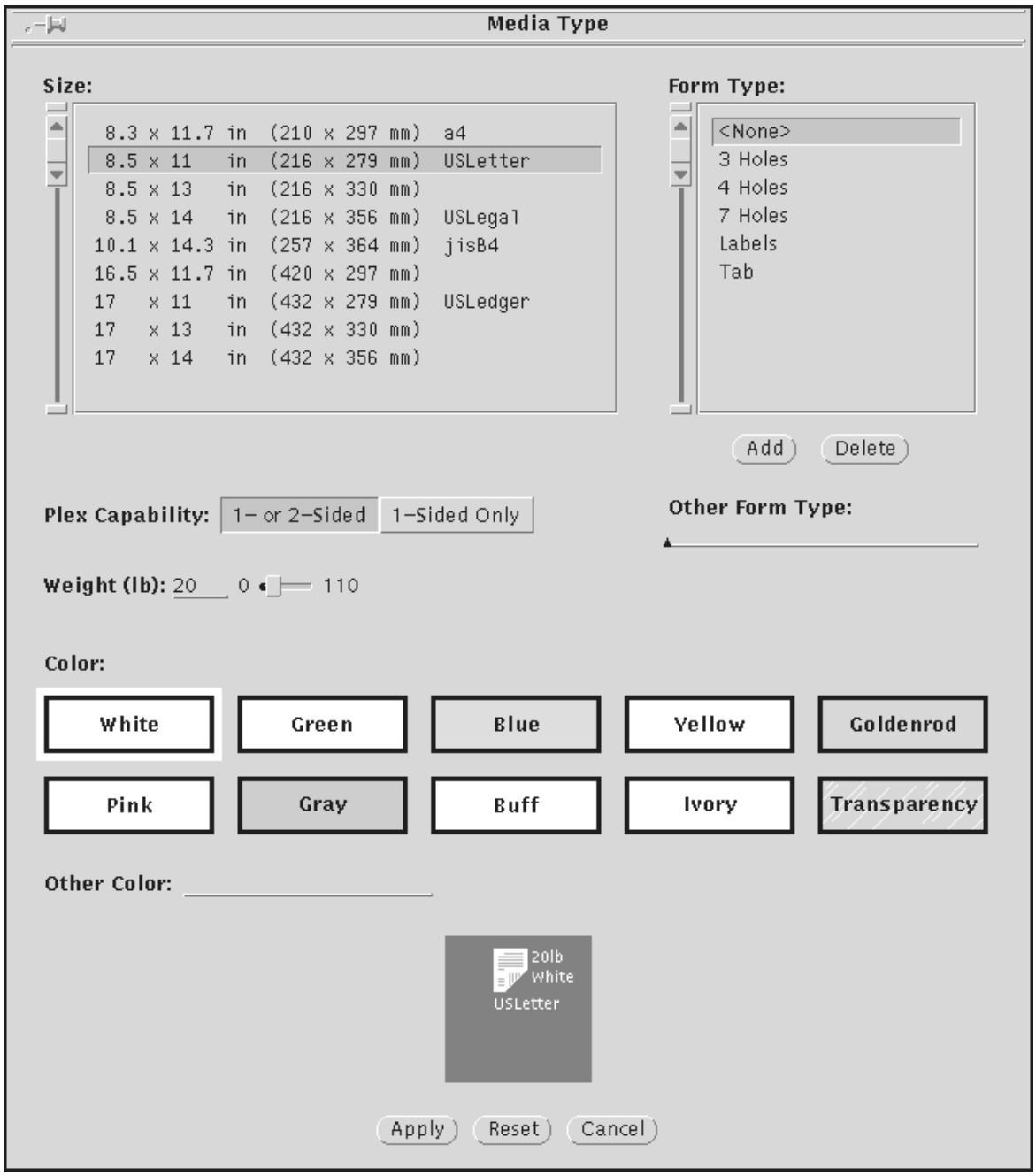


The Media Library window contains the following elements:

- Buttons
  - — **Add** — Displays the Create a New Media Type window, which enables you to add new media icons to the Library.
  - — **Edit** — Displays the Edit a Media Type window, which allows you to change media icons in the Library.
  - — **Delete** — Deletes a media icon from the Library.
  - — **Edit Defaults** — Displays the Edit the Media Defaults window, which allows you to create or change the default media attributes (except for media size)
  - — **Quit** — Closes the Media Library window
- Media icons — Icons representing the different stocks that you use in your IPS printer.

3. Click the left mouse button on the **Add** button. The Media Type window displays.

Figure 4-26. **Media Type window**



4. On the Media Type window, make your selections in the following fields for the new media icon you are adding.

Note: The icon display box at the bottom of this window shows the media icon with which you are currently working. Each time you make a selection or change in any of the fields on this window, that change is reflected in the display box. By watching this box, you are able to continually monitor what you are creating without needing to apply or save your work first.

- **Size** — Lists all the standard sizes of stocks supported on your IPS printer. To select a media size, highlight it by clicking it with the left mouse button.

Note: This list contains only standard stock sizes. You cannot create or specify paper sizes not contained in this list.

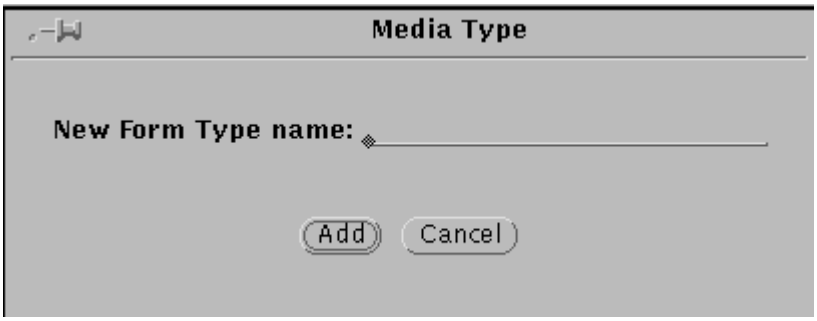
If you have a job that requires a size of paper that is not on this size list, add it using the Tools icon on the printer control console. (Refer to the “Printers” chapter in the *Xerox DocuPrint 4850/4890 IPS System Overview Guide*.) However, the size must be within the length/width range supported by your IPS printer. (Refer to the “Paper and other print media” chapter in the *Xerox DocuPrint 4850/ 4890 IPS System Overview Guide*.)

- **Plex Capability —** Specifies whether the media will be simplex or duplex, or simplex only.
- **Form Type —** Lists the types of stock you will use in your IPS printer (e.g., standard, 3-hole, transparency, etc.). To select a form type from this list, highlight your selection by clicking it with the left mouse button.

  You can create new stock types to add to this list by following these steps:

  a. Click the Add button, located below the Form Type list box. The following window displays:

Figure 4-27. **Add a New Form Type window**



  b. With the cursor positioned on the Add a New Form Type window, enter the name of the media type you want to add to the list (such as 2-hole, Reinforced, etc.).

  c. Click Add on the Add a New Form Type window. Your new stock type displays on the Form Type list.

To create a temporary form type: You may have occasion to create a media icon requiring a form type you know you will not need again for any other stock. You do not want to add this form type to the list of those you use frequently. For this, you can create a temporary form type that will be available only while you are creating your media icon.

a. On the Other Form Type line, located below the Add and Delete buttons, click the left mouse button.

b. Enter a name for the new form type. The text you enter displays in the media icon display box at the bottom of the screen as well as on the Other Form Type line. *Do not click the Add button.*

Note: After you complete all edits to your media icon, click Apply, and close the Create a new Media Icon window, your temporary form type will be deleted.

If you want to save the temporary form type to the Form Type list, do the following *before* closing the window:

1. Click the Add button. The Add a New Form Type window displays with your temporary form name already displayed on the New Form Type Name line.
2. Click the Add button. Your formerly temporary form name will now appear in the Form Type list.

To delete a name from the Form Type list: Click the item to be deleted, then click the Delete button located below the Form Type box.

- **Weight (lbs.)** — Specifies in pounds the weight of the media you are adding. Use the incremental spin buttons to display your desired paper weight. You can specify weights only within the range supported by your printer.

  For information on changing the weight units, refer to the "Specifying the media units" section earlier in this chapter.

- **Color** — Specifies the color of the stock represented by the media icon you are creating. There are two ways to do this:

  — Select a standard stock color by clicking one of the color boxes in this field.

  — Specify another color by entering its name on the **Other Color** line below the color boxes. The text you enter also displays in the media icon display box at the bottom of the screen.

- **Icon display box** — Displays the media icon you are currently creating or changing, and reflects all changes as you make them.

5. Click Apply. Your new media icon displays in the Media Library window.

Note: If you want the Create a new Media Type window to remain open while you create multiple icons, be sure the pin button in the upper left corner of this window is "in" before you click Apply. Otherwise, the window closes when you click Apply, and you must reopen it to create another icon.

- To "push the pin in," click once the pin button that is in the "out" position.
- When you are finished creating icons, click once the pin button (in the "in" position), or click the Cancel button to close the window.

6. Repeat steps 3–5 for any additional media icons you wish to create.

Changing a media icon

To change or edit a media icon in your Media Library, follow these steps:

1. Access the Media Library window. For the procedure, refer to the “Creating a media icon” section earlier in this chapter.
2. On the Media Library window, do one of the following:
   - Double-click the media icon you want to change, or
   - Single-click the icon to be changed (a white box displays around the selected icon), then click the Edit button.
3. On the Media Type window, make any desired changes to the selected icon’s parameter fields. The changes you make are reflected in the display box at the bottom of the Media Type window. For an illustration of the window and explanation of the fields on it, refer to the “Creating a media icon” section earlier in this chapter.
4. Click Apply to save your changes. The selected icon displays in the Media Library with the revisions you made.

Deleting a media icon

To delete a media icon from the Media Library:

1. Access the Media Library window. For the procedure, refer to the “Creating a media icon” section earlier in this chapter.
2. On the Media Library window, click the media icon you want to delete.
3. Click the Delete button at the top of the window. A confirmation window displays.
4. Click OK. The selected media icon is removed from the Media Library.

Editing the media defaults

A set of default media attributes (size, weight, form type, and color) is established at installation by you or your Xerox representative, based on your printing requirements.

These default media attributes serve two purposes:

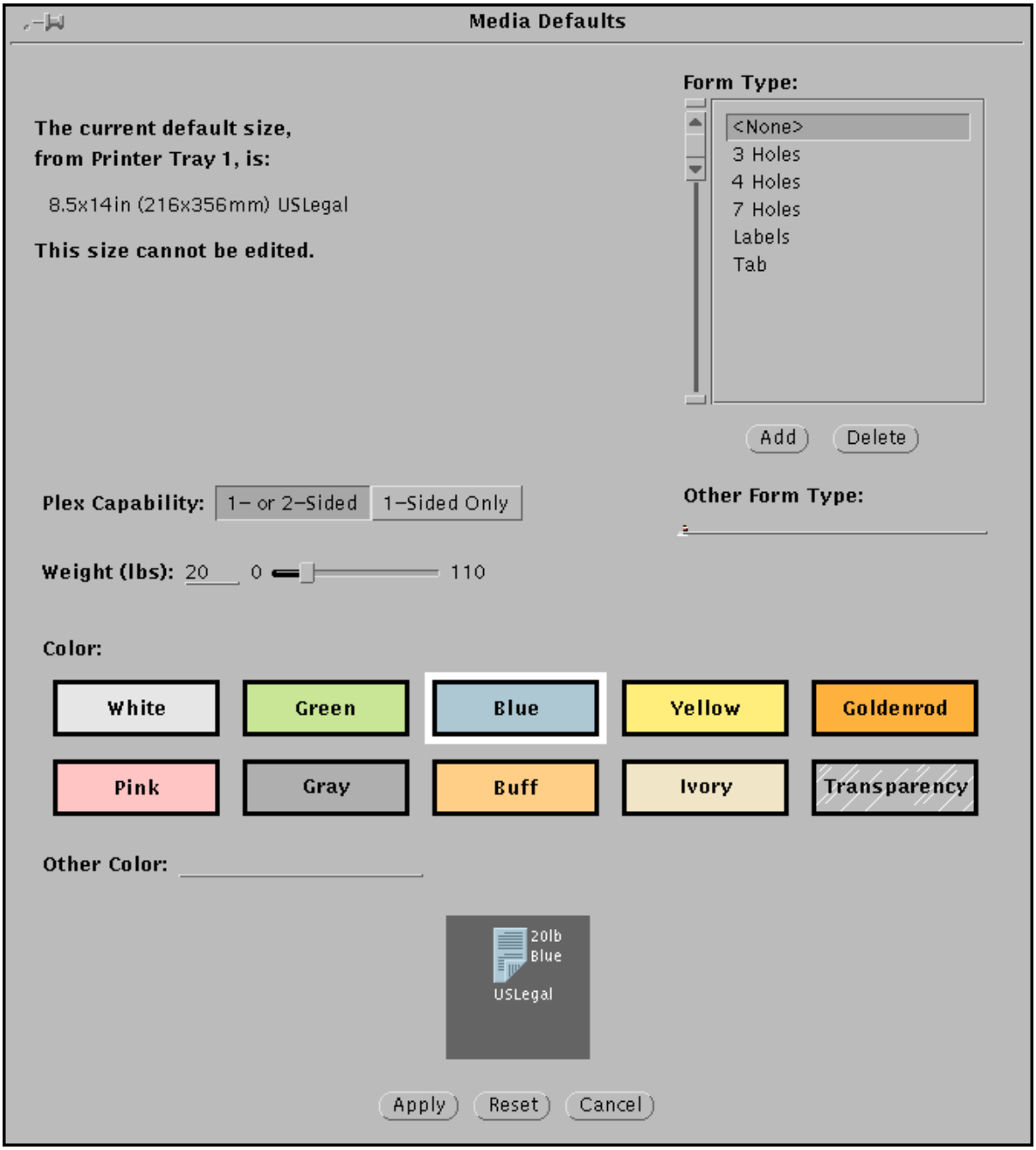
- When you open the Media Type window, the default attribute values (size, form type, weight, and color) appear in the various fields.
- If you load a stock that is not the size specified in the current input configuration, the IPS detects this when it checks the feeder tray adjustment. It does not have a way to identify the other attributes (form type, weight, and color); therefore, it assumes the default values for these attributes.

  A message window displays, stating that the configuration has changed. You may then either accept this assumed input configuration or manually change it.

You are able to edit the default media attributes in much the same way you would edit any media icon.

1. Access the Media Library window. For the procedure, refer to the “Creating a media icon” section earlier in this chapter.
2. Click the Edit Defaults button on the Media Library window. The Edit the Media Defaults window displays.

Figure 4-28. **Media Defaults window**



3. Make changes to all desired fields. (For an explanation of these fields and the procedures for changing them, refer to the “Creating a media icon” section earlier in this chapter.)

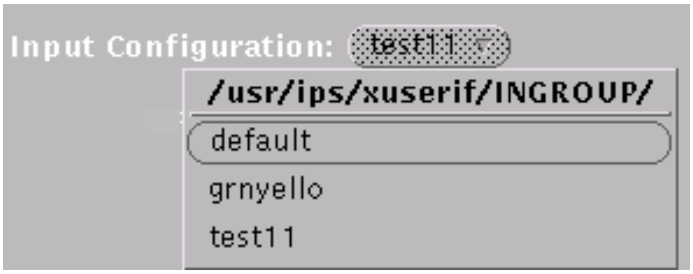
Note: The Media Size field cannot be edited. The default media size is always the current setting for physical feeder tray 1. This value is the only item displayed in the Media Size field.

Adding a new input configuration

To create a new input configuration:

1. From the Input Configuration pull-down menu, select any name to use as the base for building the new configuration. (You will rename the new file, so the existing file you selected to build from will not be changed.)

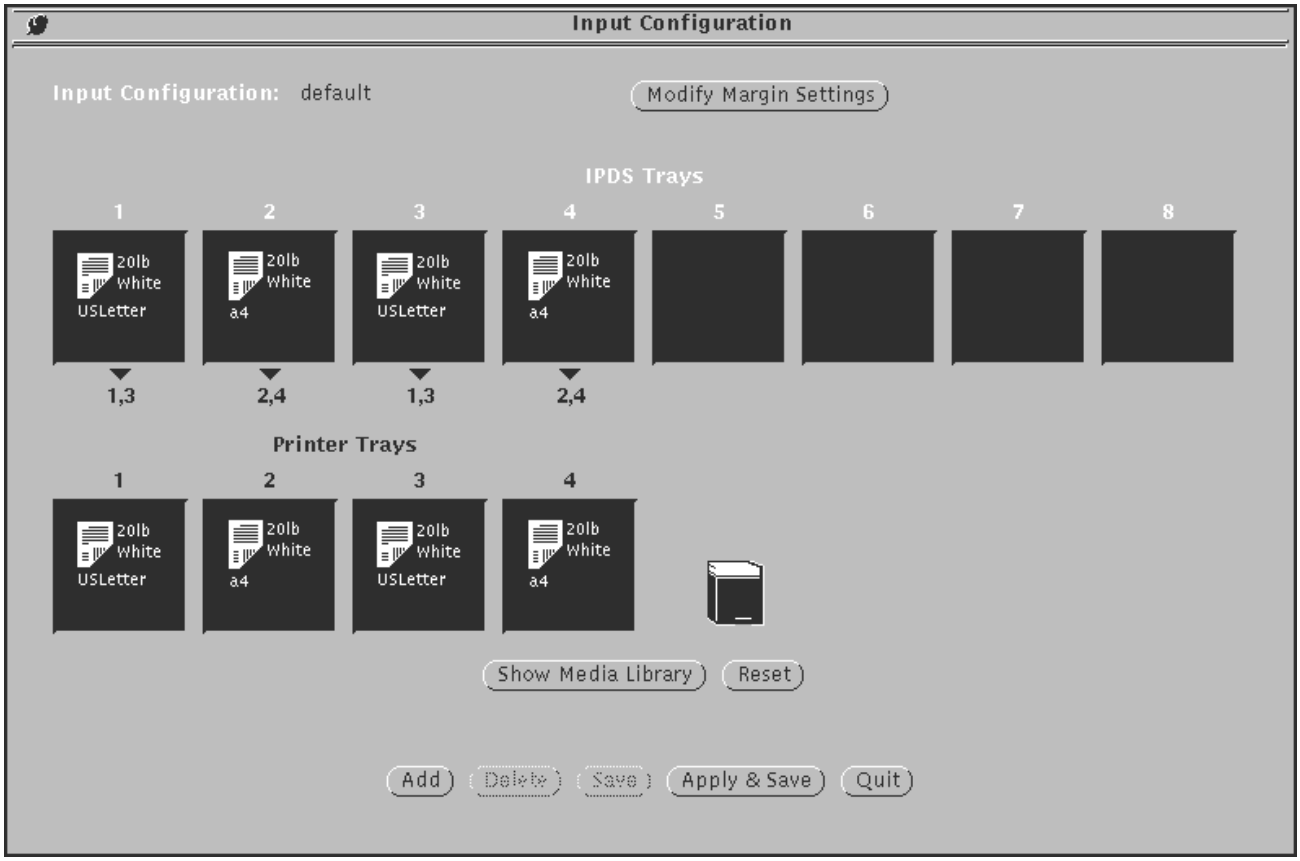
Figure 4-29. **Input Configuration pull-down menu**



   If you wish, you can use whatever input configuration was already displayed when you opened the window, without selecting from the Input Configuration menu.

2. To access media icons for the stocks you want for this configuration, click the Show Media Library button to display the Media Library window. (If all the stocks you need are already displayed in tray cells on the IPS Input Configuration window, you can skip this step.)

Figure 4-30. **Input Configuration window**

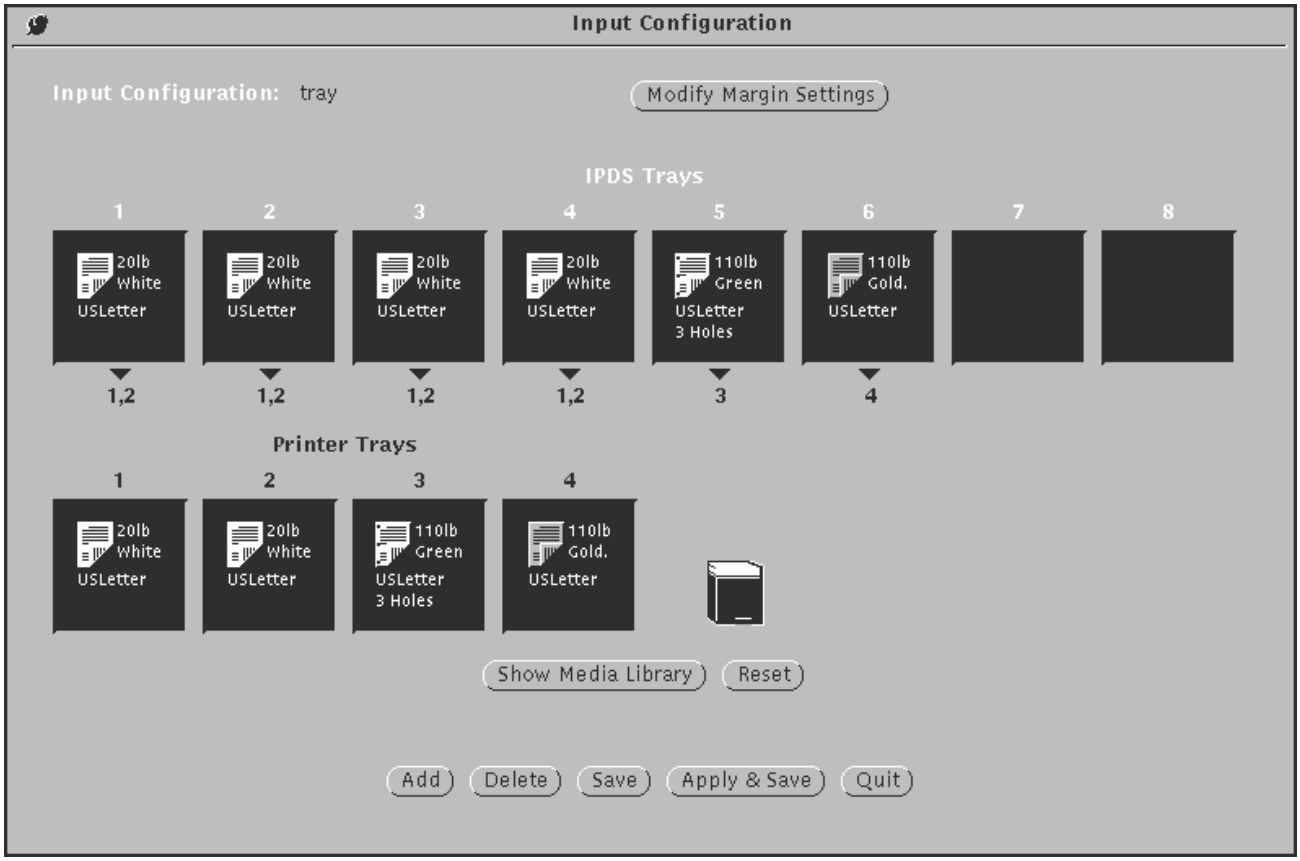


3. If you need any stocks for which there are no icons in the Media Library, create media icons for them. (Refer to the “Setting up the Media Library” section earlier in this chapter.)
4. In the **Printer Trays** field (*second* row of boxes) on the Input Configuration window, specify the media that has been or will be loaded in the printer feeder trays.

   Printer Trays field: This field consists of a row of boxes called “tray cells,” each of which represents one of the printer’s feeder trays. The number above each tray cell is the tray’s identification number. (The number of tray cells in this field is the number of input trays your IPS has.)

   Any printer tray for which a particular stock has been identified displays a media icon in its tray cell. A media icon graphically represents a stock, showing its size, weight, form type, and color.

Figure 4-31. **Tray cells section of a sample input configuration**



Example: In the example shown above, the cells for printer trays 1, 2, 3, and 4 all contain media icons for 20-pound white USLetter (8.5 by 11-inch) paper. Tray 5 is configured with 20-pound green three-hole USLetter paper, and tray 6 has 110-pound goldenrod USLetter card stock.

To set up the printer tray cells: Place the media icons for the stocks that will be loaded in the printer in the cells in the Printer Trays row. Follow these steps for each tray you are configuring:

a. On the Media Library window, position the cursor over the media icon you are selecting for that tray.

b. Holding down the left mouse button, drag the icon to the IPS Configuration window and to the printer tray cell where you want it, then release the mouse button ("drag and drop").

- If you drag an icon to an empty cell, that icon is copied into that cell.
- If you drag an icon to a cell that already contains an icon, the icon you drag replaces the one that was there.
- To delete an icon from a cell and leave the cell empty, drag the icon to the "Trash Bin," located to the right of the Printer Tray cells.

You may drag and drop media icons from three places:

- **The Media Library:** Drag any icon from the Media Library window to a destination tray cell on the IPS Input Configuration window.

- **Other tray cells:** Drag a media icon from any other IPDS or Printer Tray cell on the IPS Input Configuration window.
- **The Create or Edit Media Library windows:** You can drag the icon displayed in the viewing box at the bottom of the window to any tray cell on the Input Configuration window.

c. Repeat this procedure for all printer tray cells you want to fill.

d. When finished, click the Dismiss button on the Media Library to close it.

5. In the “IPDS Trays” field (*top* row of boxes), place a media icon in each IPDS tray that is called out in the print job, to map it to the printer tray containing the media on which you want that part of the job to print.

   IPDS Trays field: This field consists of a row of eight tray cells, each of which represents an input tray that a job might specify.

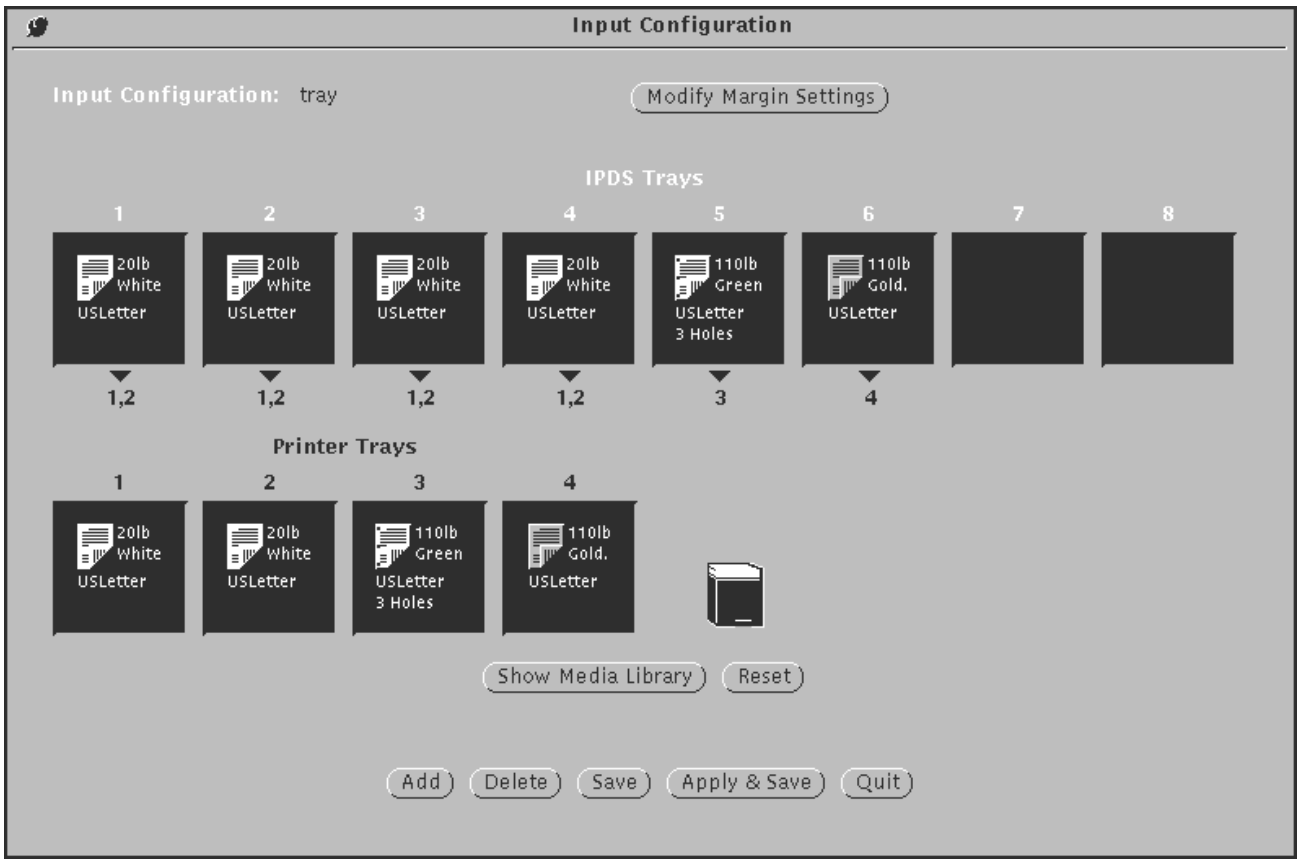
   Mapping IPDS input trays: By placing copies of the same media icon in a printer tray cell and an IPDS tray cell, you *map* that IPDS tray to that printer tray. Then, when the job calls out that IPDS tray, paper feeds from the printer tray to which it is mapped.

   - The media icon in each IPDS tray cell represents the stock in the printer tray to which that IPDS tray is mapped.
   - The number(s) below each tray cell indicate the printer trays to which the IPDS tray has been mapped.

   Note: When a print job calls for paper sizes that span over different pitch modes, the software will either cycle down or run at a lower pitch mode, based on the different pitch modes required, the paper sizes called for, the speed of the printer, and the time it takes to shut down the printer.

   Therefore, map the IPDS trays based on your needs; Do not place media icons in the IPDS cells if your job does not require it.

Figure 4-32. **Tray cells section of a sample input configuration**



Example: In the example shown above, IPDS trays 1, 2, 3, and 4 are all mapped to printer trays 1 and 2. Note that under each of these four IPDS tray cells you see the printer tray numbers (**1,2**), to which the IPDS tray is mapped. This means that paper for all parts of the print job in which tray 1 is specified by the IPDS data stream will feed from feeder tray 1. When printer tray 1 is empty, feeding will automatically switch to printer tray 2. Printing will not stop until both printer trays are empty. (The same thing will happen for parts of the job calling for IPDS tray 2, 3, or 4, because all of them are also mapped to printer trays 1 and 2 for this configuration.)

The paper that should be loaded in printer trays 1 and 2 is 20-pound white USLetter, as indicated by the media icons in each printer tray cell. This means that all parts of the job in which tray 1, 2, 3, or 4 is specified in the data stream will print on 20-pound white USLetter (provided this paper is loaded in the physical printer trays that have been mapped to IPDS trays 1 through 4).

Any parts of the job that call out IPDS tray 5 will print on the three-hole green paper, which is specified for printer tray 3, to which IPDS tray 5 is mapped. (This might be section dividers in the document.) IPDS tray 6 is mapped to printer tray 4, so the job parts calling out tray 6 (possibly the front and back covers of the document) will print on the 110-pound goldenrod card stock.

To set up the IPDS tray cells: In each IPDS tray cell, place the same media icon that is in the cell for the printer tray to which you want to map that IPDS tray. Follow these steps for each IPDS tray you are mapping:

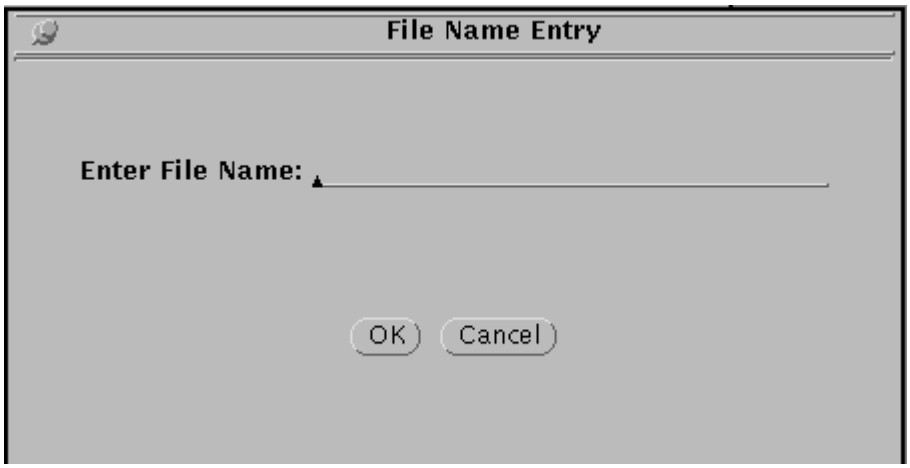
a. On the Input Configuration screen, drag the media icon from the printer tray cell to the IPDS tray cell you want to map to it. The media icon is copied into the IPDS tray cell where you release the mouse button.

b. Repeat step **a** for each IPDS tray called out in the print job.

Note: The display of eight IPDS tray cells means eight IPDS trays are reported to the host when the printer is started. Any IPDS tray not containing a media icon is flagged to the host as "disabled." If a job calls out an IPDS tray marked disabled, PSF on the host substitutes one of the available trays (those containing media icons), and displays an error message.

6. Click Add. The File Name Entry window displays.

Figure 4-33. **File Name Entry window**



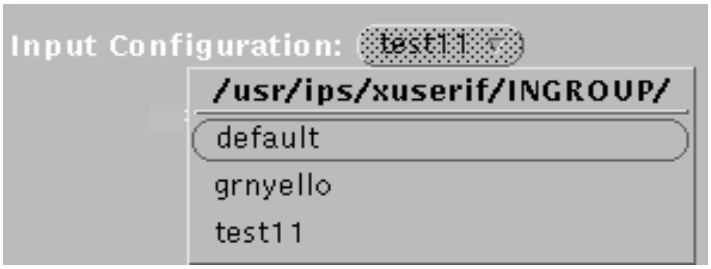
7. Enter the name for the new input configuration.
8. Click OK to save the new input configuration and return to the IPS Input Configuration window. Your new configuration name is added to the Input Configuration pull-down menu.
9. If you want to put your new configuration into effect immediately, click Apply & Save.
10. Click Quit to return to the IPS main window.

Changing an input configuration file

To change an existing input configuration:

1. From the Input Configuration pull-down menu, select the input configuration you want to change.

Figure 4-34. **Input Configuration pull-down menu**



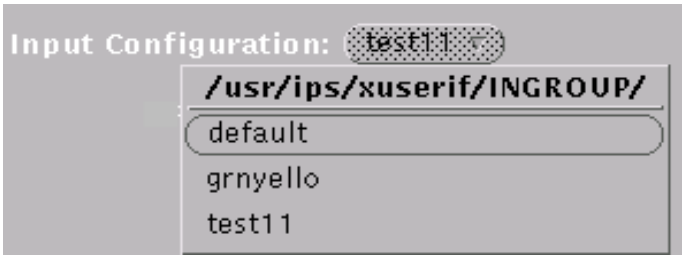
2. Create or change any media icons you need in the Media Library. (Refer to the “Setting up the Media Library” section earlier in this chapter.)
3. Make the necessary changes to the media icons displayed in the IPDS and Printer Tray cells. (For an explanation of these fields, refer to the “Adding a new input configuration” section earlier in this chapter.)
4. Click Save to save your changes, or Apply & Save to set your selections and to put your updated configuration into effect.
5. On the confirmation prompt window that displays, click Apply.
6. On the Input Configuration window, click Quit to return to the main window.

Deleting an input configuration file

To delete an input configuration:

1. From the IPS main window Input section, click the Modify button. The IPS Input Configuration window displays.
2. From the Input Configuration pull-down menu, select the input configuration you want to delete.

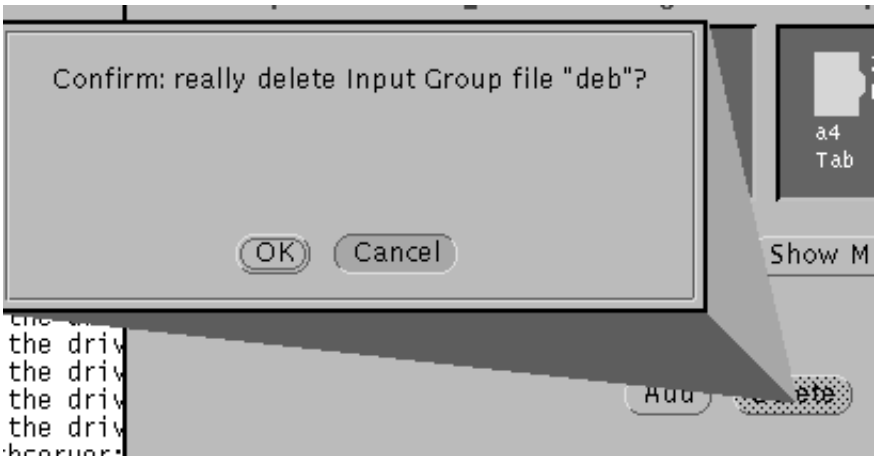
Figure 4-35. **Input Configuration pull-down menu**



Note: The “Default” input configuration cannot be deleted. Attempts to do so produce an error message.

3. Click Delete. A Delete File confirmation prompt window displays.

Figure 4-36. **Delete File confirmation prompt**



4. In the confirmation prompt window, click OK to delete the input configuration and return to the IPS Input Configuration window. The deleted file name is removed from the Input Configuration pull-down menu.
5. Click Quit to return to the IPS main window.

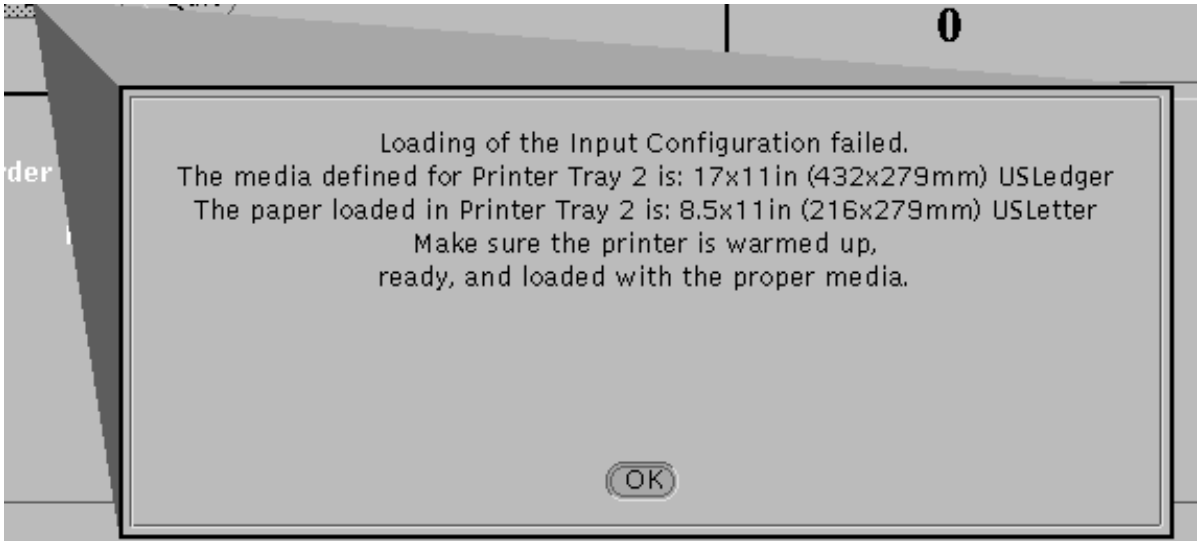
Correcting a feeder tray mismatch error

When a feeder tray is adjusted for a certain size paper, the system senses that adjustment. (Other stock attributes, such as weight, color, and form type, are not sensed.) The IPS also reads the input configuration, which informs it of what size paper *should* be loaded in any particular tray.

A feeder tray mismatch error is signaled when the IPS detects that the paper being specified in the current input configuration for a particular printer tray is not the same size as the paper actually loaded in that physical tray.

When you click Apply & Save to implement the configuration, an error message window displays, giving the number of the printer tray, the media size that is loaded in it, and the size paper that was specified for it in its corresponding tray cell. The Input Configuration window remains open and the configuration you are working on is not updated.

Figure 4-37. **Feeder tray mismatch error message**


0
Loading of the Input Configuration failed.
The media defined for Printer Tray 2 is: 17x11in (432x279mm) USLedger
The paper loaded in Printer Tray 2 is: 8.5x11in (216x279mm) USLetter
Make sure the printer is warmed up,
ready, and loaded with the proper media.
OK

If a tray mismatch error occurs, follow these steps:

1. Click OK to close the message window and unlock the screen.
2. On the Input Configuration window, do one of the following:
   - In the mismatched printer tray cell, place a media icon that matches the paper already loaded in the printer.
   - Replace the paper in the physical tray with stock of the size specified in your input configuration.
3. Click Apply & Save. If there are no more mismatches, the Input Configuration window closes and your configuration is updated and applied.
4. If there are additional mismatches, or the first one still has not been fixed, the Mismatch error message window redisplays and the Input Configuration window remains open. Repeat steps 1 through 3 until all mismatches are corrected and the Input Configuration window remains closed.

Specifying the output configuration

This section describes the procedures you use to specify output tray configurations for your system. (For an explanation of the buttons on these windows, refer to the “Buttons” section in the “Introduction to the graphical user interface” section.)

When you specify the output configuration, you specify one or more stacker trays for each IPDS output bin specified in a print job. The printer delivers the printed output to the trays specified for a given IPDS bin; it stops and notifies you to unload output only when all those trays are full.

Note: When configuring stacker groups, the printer feeds from any of the stackers in the group, with no particular order to follow. In other words, the printer will not necessarily start with the lowest numbered stacker in the group.

The ability to configure multiple output trays to receive a print job greatly reduces interruptions for unloading output.

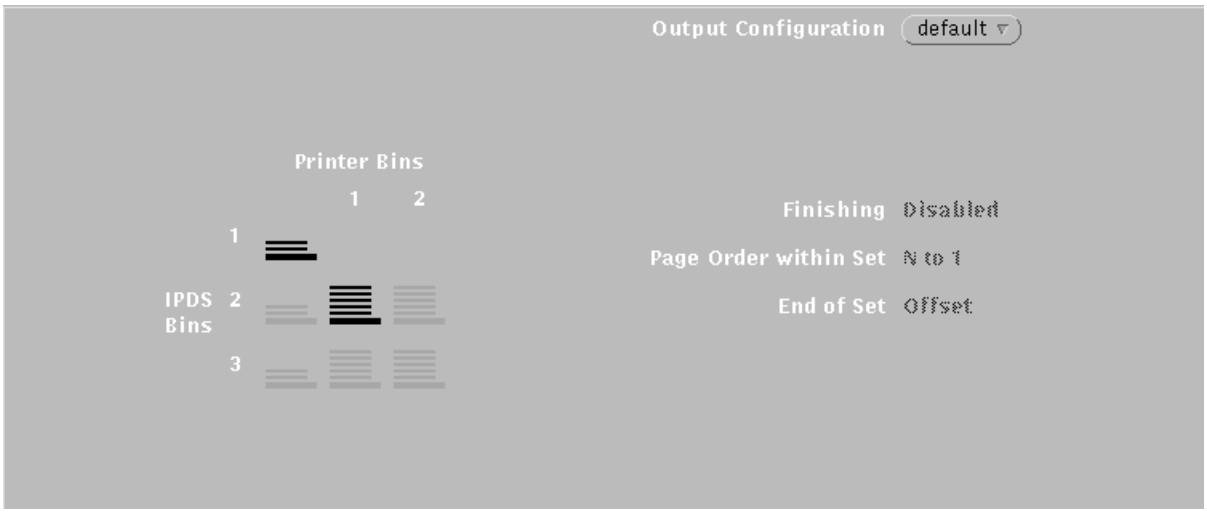
Example of an output configuration

In the Output Configuration section of the main window, the horizontal rows of icons represent the IPDS bins specified in the job as the output destination. The vertical columns represent the actual printer bins to which output will be delivered.

When a bin has been selected as part of the configuration, it displays bolded on the screen. By looking at the printer bin number or letter at the top of the column above each bolded icon, and at the IPDS bin number at the beginning of the row beside the same bolded icon, you can see which IPDS bins have been mapped to which printer bins.

Following is an example of an output configuration.

Figure 4-38. **Example of an output configuration, displayed on the IPS main window**



In the illustration above, IPDS bin row 2 has the stacker icon in the Printer Bin column 1 bolded. This shows that IPDS bin 2 has been mapped to printer output bin (stacker tray) 1. Therefore, all parts of the job for which IPDS bin 2 is called out will be delivered to stacker tray 1. When stacker 1is full, printing will stop until it is emptied.

Because IPDS bin 1 is permanently mapped to the printer sample tray, its row contains only the short sample tray icon, bolded.

Note: To avoid all output going to the sample tray (bin 1), make bin 2 as your default.

Creating a new output configuration

To create a new output configuration:

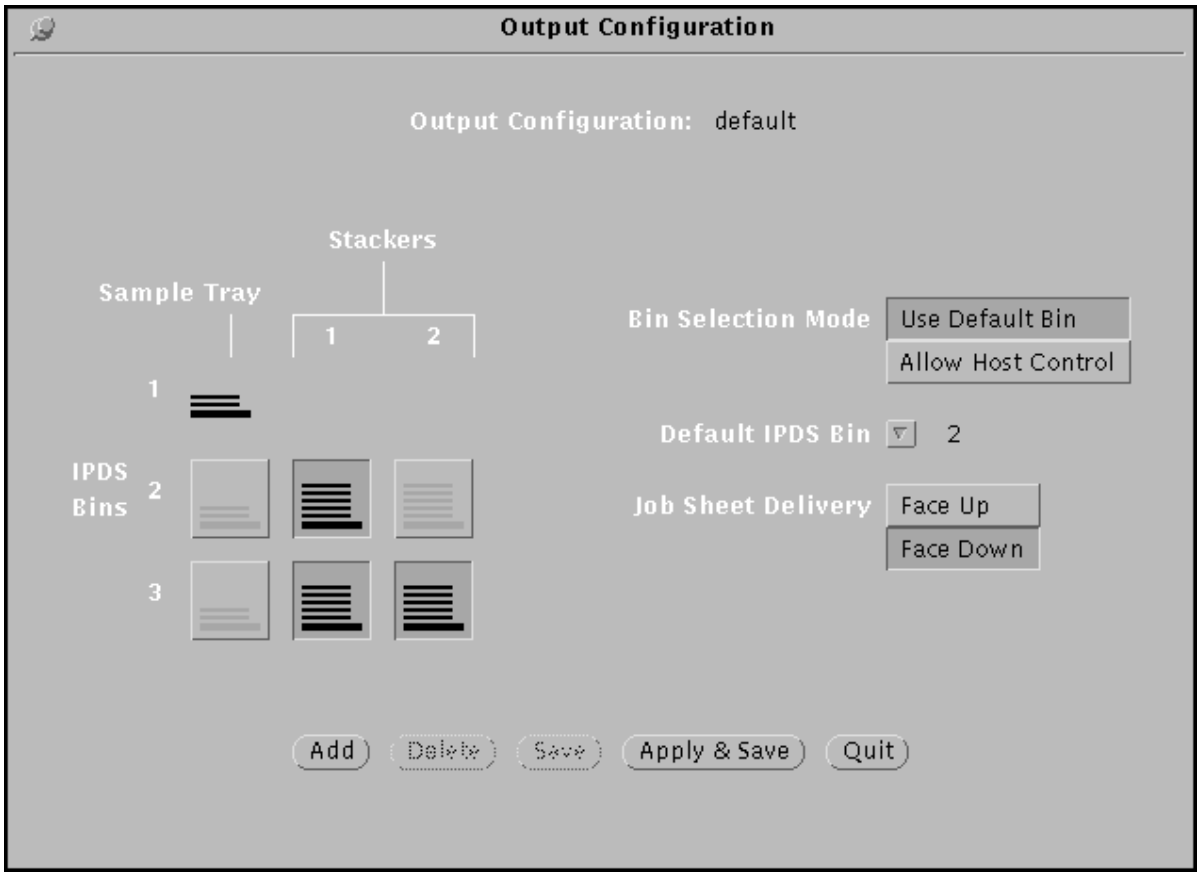
1. From the Output Configuration pull-down menu on the IPS main window, select any name to use as the base for the new output configuration.

Figure 4-39. **Output Configuration pull-down menu**

(You will rename the new file, so the existing file you selected to build from will not be changed.)

The Output Configuration window displays.

Figure 4-40. **Output Configuration window (systems without DFA)**



2. Make any desired changes in the fields described below.

   - **Bin Selection Mode** — Specifies how the IPS will determine the bin to which the job will be delivered.

     The option buttons are:

     — **Use Default Bin** — Output will be delivered to the bin you designate from the Default Bin Number pull-down menu.

     — **Allow Host Control** — The host handles bin selection, and the system uses the bin you selected to correspond to the IPDS Bin number.

   Note: If you are enabling DFA, select "Allow Host Control" for the bin selection mode.

   - **Default IPDS Bin** — Specifies the number for the bin to which output will be delivered if "Use Default Bin" is selected from the Bin Selection Mode menu, or if a bin number is not specified by a job on the host.

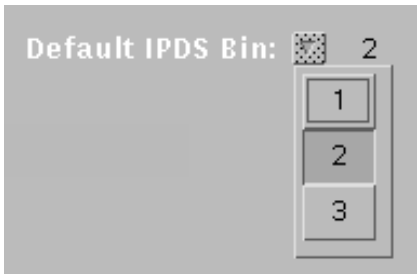
   Note: Output is delivered to the default bin if one of the following conditions applies:

   — "Use Default Bin" is selected as the Bin Selection Mode.

   — "Allow Host Control" is selected as the Bin Selection Mode, but there is no OUTBIN statement for the host.

   — "Allow Host Control" is selected as the Bin Selection Mode, but the OUTBIN specified is greater than the number of stackers.

Figure 4-41. **Default IPDS Bin pull-down menu**



Note: The IPDS Bin 1 row is set to Sample Tray, and cannot be changed. If you want your output to be delivered to the stacker trays, you must select something other than Bin 1 for the Default Bin Number.

- (DFA systems only) Check the "Finishing" box then click the Finishing Attributes button to specify the finishing attributes. Refer to "Specifying finishing attributes" later in this section.
- (Systems with a stitcher only) Check the "Stitching" box then click the Stitching Attributes button to specify the finishing attributes. Refer to "Specifying stitching attributes" later in this section.

3. (DFA systems only) From the DFA Profile pull-down menu on the IPS main window, select the DFA output personality profile you will use with this configuration.

Figure 4-42. **DFA Profile pull-down menu**

If you want to create a new DFA output profile at this time, refer to the “Adding a DFA output personality profile” section later in this chapter.

If you do not want to make changes to the displayed profile, click Quit on the Output DFA Profile window to close it.

Note: If DFA is not enabled on your system, this pull-down menu does not appear on your IPS Output Configuration window.

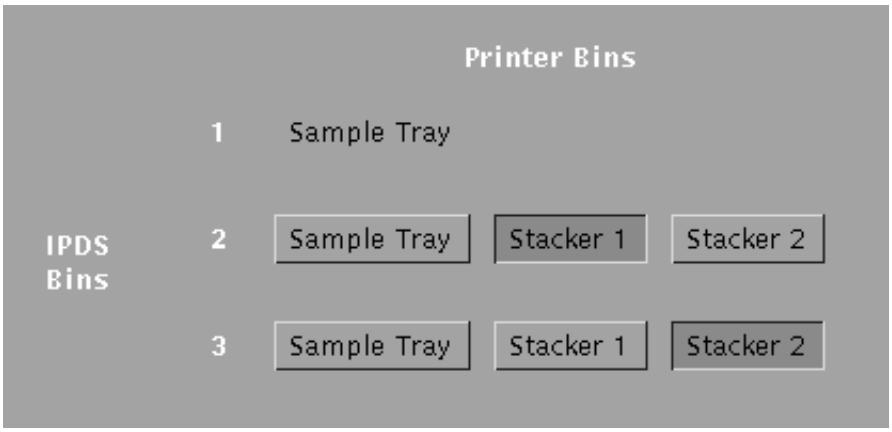
4. On the left side of the Output Configuration window, map each IPDS bin called out in the job to the stacker(s) that will receive the parts of the job in which that IPDS bin is specified.

   - **IPDS Bins** — Each (horizontal) *row* of rectangular buttons represents an **IPDS bin** called out in the job.
   - **Printer Bins** — Each (vertical) *column* of bin buttons represents one of your IPS printer’s stacker bins/trays.

   To map IPDS bins to printer stacker bins: In each IPDS bin row, click the button for the physical printer bin that you want to receive the parts of the job calling for that IPDS bin. You may select more than one printer button in each row.

   Note: In the illustration below, you can see that the IPDS Bins row 1 does not contain any selectable bin buttons—only a sample tray specification. IPDS bin 1 is coded in the software to be mapped to the sample tray; you are not able to change this part of the output configuration. All parts of any print job in which the data stream calls for IPDS bin 1 are delivered to the sample tray.

Figure 4-43. **Bins section of the Output Configuration window**

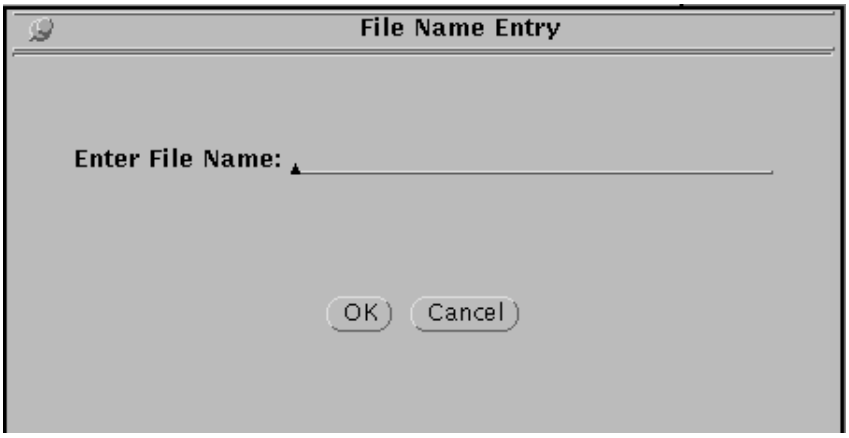


Example: In the illustration, IPDS bin row 2 has the Stacker 1 button highlighted (selected). This shows that IPDS bin 2 has been mapped to printer output bin (stacker tray) 1. Therefore, all parts of the job for which IPDS bin 2 is called out will be delivered to stacker tray 1. When stacker 1 is full, printing will stop until it is emptied.

The row for IPDS bin 3 contains a highlighted bin button for Stacker 2. This means that all parts of the printed job calling for IPDS bin 3 will go to stacker 2. When stacker 2 is full, printing will stop until it is emptied.

5. On the IPS Output Configuration window, click Add. The File Name Entry window displays.

Figure 4-44. **File Name Entry window**



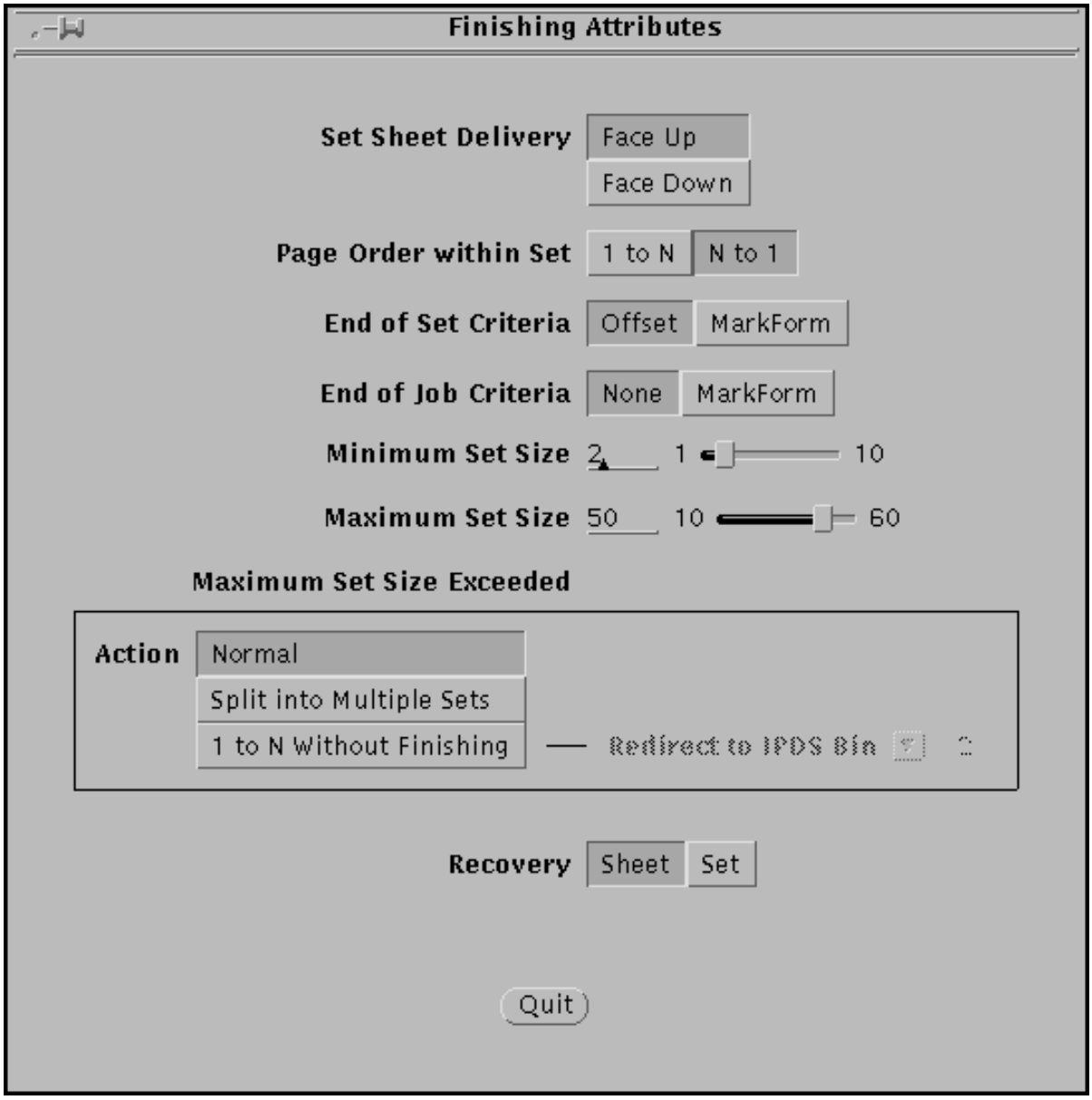
6. Enter the name of the new configuration.
7. Click OK to save the new configuration and return to the IPS Output Configuration window. Your new configuration is added to the Output Group Name menu.
8. If you want to put your new configuration into effect immediately, click Apply & Save, then, on the confirmation window that displays, click Apply.
9. Click Quit to return to the IPS main window.

Specifying finishing attributes (for systems with DFA)

To specify finishing attributes, follow these steps:

1. On the Output Configuration window, check the “Finishing” box, then click the Finishing Attributes button. The Finishing Attributes window displays.

Figure 4-45. **Finishing Attributes window (systems with DFA)**



2. On the Finishing Attributes window, make selections or enter values in the fields described below.
   - **Set Sheet Delivery** — Specifies whether sheets will be delivered Face Up or Face Down.
   - **Page Order within Set** — Specifies the order in which pages in a set will be delivered to the output bin: first-to-last or last-to-first.
     - **1 to N** — Output sheets are delivered to the output bin in ascending order (the first page is delivered first).

— **N to 1** — Output sheets are delivered to the output bin in descending order (the last page is delivered first).

Note: The size of the ordered set must fall within the specified maximum set size.

- **End of Set Criteria** — Specifies the criterion that marks the end of a set for your system.
  - — **Offset Stacker** — A JOG (offset) command in the job indicates the end of a set.
  - — **MarkForm** — A MARKFORM command in the job indicates the end of a set.
- **End of Job Criteria** — Specifies the criterion that marks the end of a job.
  - — **None** — No end-of-job marking
  - — **MarkForm** — A MARKFORM command in the job indicates the end of a job
- **Minimum Set Size** — Specifies the minimum number of sheets that can be in a set. You use this field to ensure that every job contains enough pages to fulfill the requirements for any finishing device. The range is 1 to 10.
- **Maximum Set Size** — Specifies the maximum number of sheets that can be in a set. The range for DFA sets is 10 to 60.
- **Maximum Set Size Exceeded** — Specifies the action to take if the maximum set size is exceeded.
  - — **Normal** — Pages print as if the Finishing Attributes were not specified (that is, the page order, end of set and end of job criteria are not honored).
  - — **Split into Multiple Sets** — Pages are split into multiple sets, each set up to 60 pages.
  - — **1 to N Without Finishing** — Output sheets are delivered to the output bin in ascending order (the first page is delivered first). Use the Redirect to IPDS Bin pull-down list to specify the desired output bin.
- **Recovery** — Specifies the boundary to which the system will recover a job if an error occurs during printing.
  - — **Sheet** — Recovers the job to the sheet boundary. If a third-party finishing device is attached, all queued pages are printed.
  - — **Set** — Recovers the job to the set boundary. If a third-party finishing device is attached, the IPS prints all pages that are queued, and also reprints any pages in the segment that were printed before the error occurred.

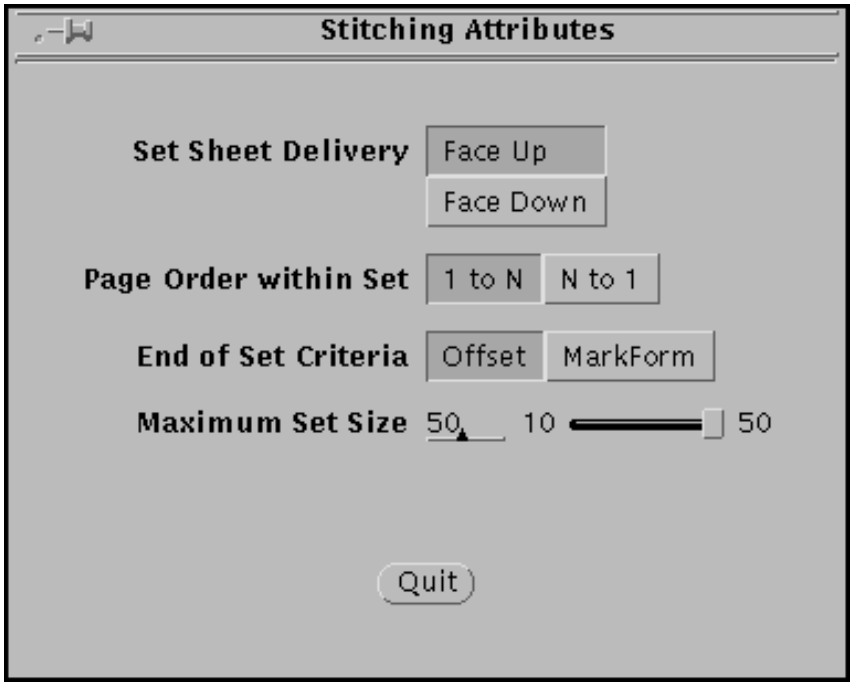
3. Click Quit to specify these finishing attributes for the present configuration file and return to the IPS Output Configuration window.

Specifying stitching attributes (for systems with a stitcher)

To specify stitching attributes, follow these steps:

1. On the Output Configuration window, check the “Stitching” box, then click the Stitching Attributes button. The Stitching Attributes window displays.

Figure 4-46. **Stitching Attributes window**



2. On the Stitching Attributes window, make selections or enter values in the fields described below.
   - **Set Sheet Delivery** — Specifies whether sheets will be delivered Face Up or Face Down.
   - **Page Order within Set** — Specifies the order in which pages in a set will be delivered to the output bin: first-to-last or last-to-first.
     - — **1 to N** — Output sheets are delivered to the output bin in ascending order (the first page is delivered first).
     - — **N to 1** — Output sheets are delivered to the output bin in descending order (the last page is delivered first).

Note: The size of the ordered set must fall within the specified maximum set size.

   - **End of Set Criteria** — Specifies the criterion that marks the end of a set for your system.
     - — **Offset Stacker** — A JOG (offset) command in the job indicates the end of a set.
     - — **MarkForm** — A MARKFORM command in the job indicates the end of a set.
   - **Maximum Set Size** — Specifies the maximum number of sheets that can be in a set. The range for DFA sets is 10 to 50.

3. Click Quit to specify these stitching attributes for the present configuration file and return to the IPS Output Configuration window.

Changing an output configuration

To change an output configuration:

1. On the Output section of the IPS main window, click the Modify button. The IPS Output Configuration window displays.
2. From the Output Group Name pull-down menu, select the configuration file you want to change.
3. Make the necessary changes to the output configuration fields and the Finishing Attributes or Stitching Attributes options, if applicable. (Refer to the “Creating a new output configuration” section earlier in this chapter.)
4. Click Update (or Apply & Save if you want to put the changed configuration in effect immediately). A confirmation window displays.
5. On the confirmation window, click Update to save the new settings.
6. Click Quit to return to the IPS main window.

Deleting an output configuration

To delete an output configuration file for the system:

1. On the Output section of the IPS main window, click the Modify button. The IPS Output Configuration window displays.
2. From the Output Configuration pull-down menu, select the configuration you want to delete.

Note: You cannot delete the Default output configuration.

Figure 4-47. **Output Configuration pull-down menu**

3. Click Delete to delete the selected output configuration. A confirmation window displays.
4. On the confirmation window, click Delete to delete the output configuration file and return to the IPS Output Configuration window. The file name is removed from the Output Group Name pull-down menu.
5. Click Quit to return to the IPS main window.

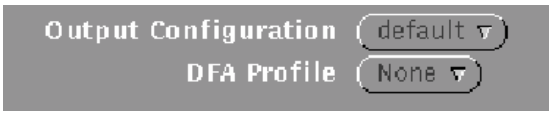
Adding a DFA profile

The values you enter for a DFA profile are provided by the vendor of your finishing equipment, except the Set Media Modification (SMM) values for Finishing Functions 1 and 2 (if used). The SMM values are specified in the job by your applications programmer.

To create a new DFA profile:

1. Locate the DFA Profile pull-down menu on the IPS main window (below the Output Configuration pull-down menu).

Figure 4-48. **DFA Profile pull-down menu**



Note: The DFA Profile menu displays only if you have DFA enabled on your IPS.

2. From the DFA Profile pull-down menu, select any name to use as a base for the new profile. (You will rename the new file, so the existing file you selected to build from will not be changed.)

Figure 4-49. **DFA Profile Name pull-down menu**

3. On the Output DFA Profile window, specify the configuration settings for the new output DFA profile.

Figure 4-50. **Output DFA Profile window**

You may make changes to the following fields:

- **Time Between Sheets (ms) (p1)** — Specifies the time required by the third party finishing device from the top of the sheet to the bottom of the sheet. The printer inserts skips to enforce this timing. You can specify from 0 to 32767 milliseconds.
- **Time Between Sets (ms) (p3 or p3a)** — Specifies the time required by the third party finishing device from the top of the last sheet in a set to the bottom of the first sheet in the next set. The printer inserts skips to enforce this timing. You can specify from 0 to 32767 milliseconds.

- **Minimum Set Time (ms) (p3b)** — (Available on some systems) Specifies the minimum time required by the third party finishing device to process a set.
- **Time to Cycle Up (ms) (p5)** — Specifies the amount of time required by the third party finishing device to obtain Ready status after receiving a CycleUp signal. You can specify from 0 to 32767 milliseconds.
- **Sheet Jam Time (ms) (p2)** — Specifies the maximum time that the printer will wait to receive a SheetDelivered signal from the third party finishing device after sending a SheetExit signal. A jam is declared when the third party finishing device signal exceeds the time increment you specify. You can specify from 0 to 13000 milliseconds.
- **Set Jam Time (ms) (p4)** — Specifies the maximum time that the printer will wait to receive a SetDelivered signal from the third party finishing device after sending an EndofSet signal. A jam is declared when the third party finishing device signal exceeds the time increment you specify. You can specify from 0 to 13000 milliseconds.
- **Recovery Control** — Specifies the action to take in case of system recovery. You can select one of the following:
  - Let DFA device select sheet or set recovery
  - Override - always use set recovery
- **Finishing Function 1 (Attributes p6/c6)**
  Finishing Function 2 (Attributes p6/c7) — These are signals through which you can specify instructions to be sent to your third party finishing device. If these functions are applicable to your device, your vendor will provide the information you need to enable them.

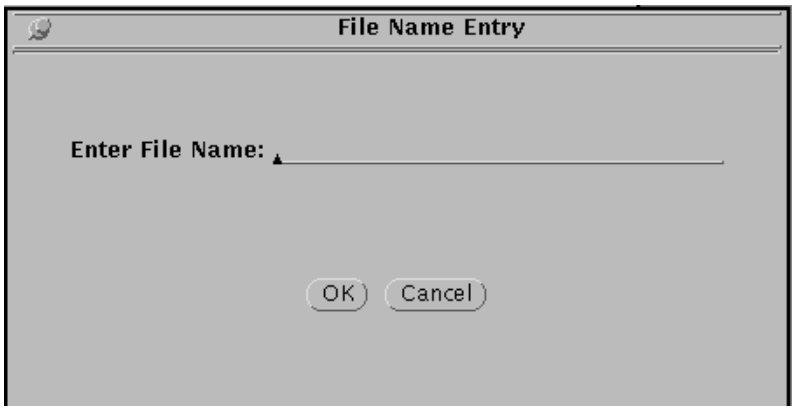
  For Finishing Functions 1 and 2, your options are:
  - **ESS control:** The data stream will select the Finishing Function.
  - **True:** The Finishing Function will always be selected.
  - **False:** The Finishing Function will always be deselected.
- **SMM Value for Finishing Function 1 (Hex)**
  SMM Value for Finishing Function 2 (Hex) — When the Set Medium Modification (SMM) value contained in the IPDS data stream matches the code number you specify here, the Finishing Function is used.

  The codes to use are taken from the two-byte values in the MMC-structured field within the selected COPYGROUP. This is set within a FORMDEF via the PROCESSING keyword in the PPFA. The range is a hexadecimal value from 0000 to FFFF. You will need to obtain these values from the job or the applications programmer.

- **Statuses Supported (p7)** — Specifies the status indicators that are supported by the third party finishing device. You can check all status indicators that apply. The selections are as follows:
  - — Not Ready
  - — Faulted
  - — Full
  - — Sheet Delivered
  - — Set Delivered
- **Delivery Signal Type (p8)** — Specifies the type of signal that can be delivered. You can select one of the following:
  - — Leading Edge
  - — Trailing Edge
- **Delivery Signal Start Adjust (ms) (p9)** — Specifies the timing of the start of delivery signal. You can enter the value or set it with the incremental spin boxes. The range is -100 to +300 milliseconds.
- **Delivery Signal Duration (ms) (p10)** — Specifies the timing of the End of Delivery signal. You can enter the value or set it with the incremental spin boxes. This value corresponds to the width of the sheet. You specify this value only when you select Trail Edge for the Delivery Signal Type. The range is 30 to 110 milliseconds.
- **Sheet Exit to End of Set Time (ms) (p11)** — Specifies the time required between the EndOfSet signal and the SheetExit signal. You can enter the value or set it with the incremental spin boxes. The range is 0 to 255 milliseconds.

4. Click the Add button when finished. The File Name Entry window displays.

Figure 4-51. **File Name Entry window**



5. Enter the name for the new DFA profile. Be sure to use a name that will help you remember which third-party finisher (or specific function) the new profile is for.
6. Click OK to return to the Output DFA Profile window.
7. Click Save to save the new DFA profile.
8. If you want to put the new profile into effect immediately, click Apply & Save.
9. Click Quit to return to the IPS main window.

Changing a DFA profile

To make changes to an existing DFA profile:

1. From the DFA Profile pull-down menu on the IPS main window (below the Output Configuration pull-down menu), select the name of the profile you want to change.
2. On the Output DFA Profile window, make changes to the parameters as desired. (Refer to the “Adding a DFA output personality profile” section earlier in this chapter, for explanations of the items in this window.)
3. Click Save to save the updated DFA profile.
4. If you want to put the updated profile into effect immediately, click Apply & Save.
5. Click Quit to return to the IPS main window.

Deleting a DFA profile

To delete a DFA profile:

1. From the DFA Profile pull-down menu on the IPS main window (below the Output Configuration pull-down menu), select the name of the profile you want to delete.
2. On the Output DFA Profile window, click the Delete button. A Delete File confirmation prompt window displays.
3. On the prompt window, click Delete. The deleted profile is removed from the DFA Profile pull-down menu.
4. Click Quit to return to the IPS main window.

Backing up and restoring configuration files

The following configuration files can be backed up and restored between IPS systems operating system software version 5.4 or higher:

- Input DFA profiles (for DFA systems only)
- Output DFA profiles (for DFA systems only)
- Input tray groups
- Output tray groups
- System configuration files
- Media library files.

Note: Configuration files created with software versions *lower* than 5.4 cannot be saved or restored to a system running release 5.4 or higher.

Note: DFA profiles can be backed up and restored between IPS systems with the same configuration and with operating system software version 5.1.8 or higher.

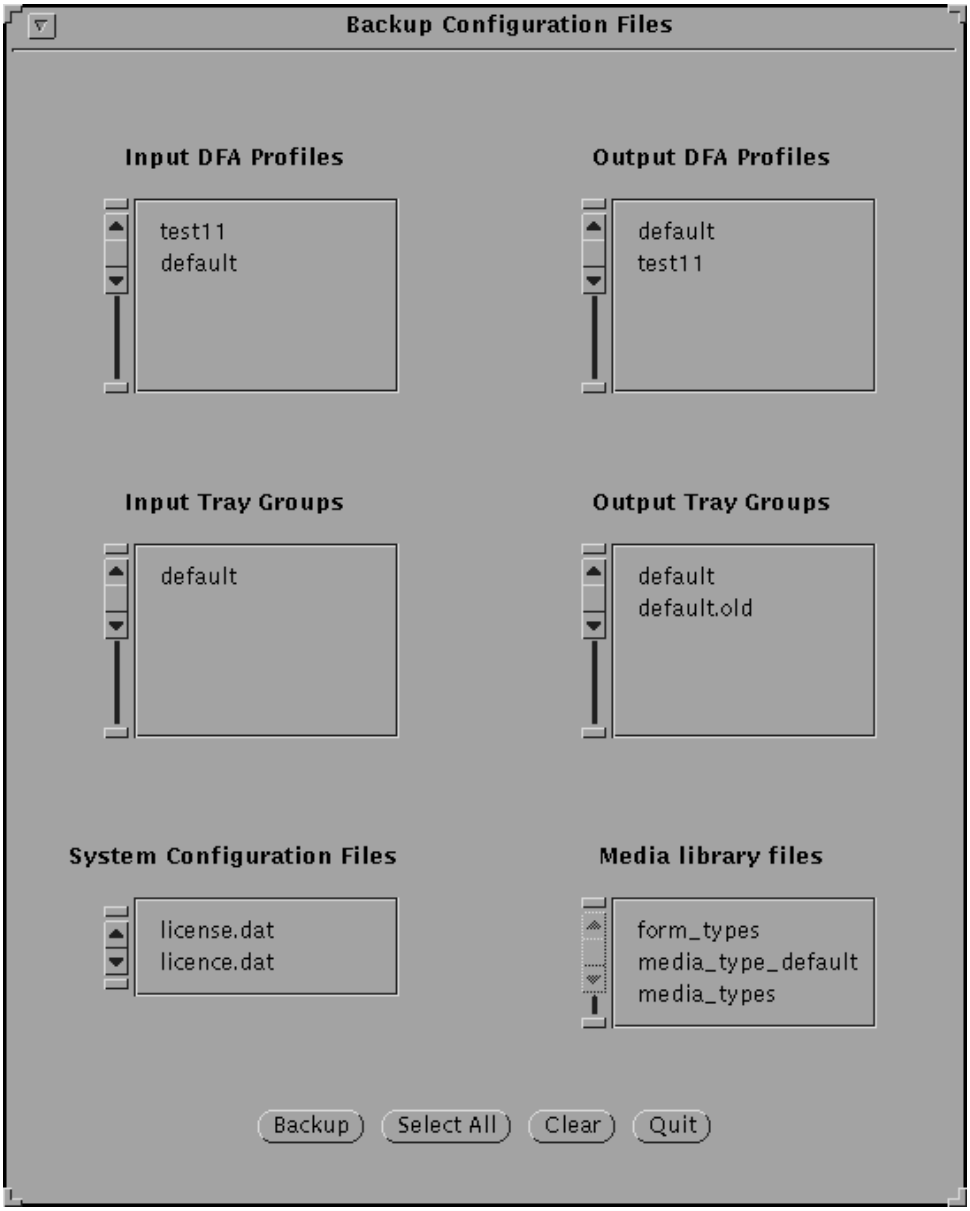
Profiles created with software versions *lower* than 5.1.8 cannot be saved or restored to a system running release 5.1.8 or higher.

Saving configuration files to diskette

To copy your configuration files to a diskette for storage or transfer, follow this procedure:

1. Insert a PC formatted diskette into the drive.
2. From the Administration pull-down menu, select Backup Configuration Files.

Figure 4-52. **Backup Configuration Files window**



3. On the Backup Configuration Files window, select the desired file(s) to backup, either individually or click Select All to select all files.
4. Click Backup.
5. Click Quit.

Restoring configuration files from diskette

To restore your configuration files from a diskette, follow this procedure:

1. Insert the diskette used for a backup of the configuration files into the drive.
2. From the Administration pull-down menu, select Restore Configuration Files.
3. On the Restore Configuration Files window, select the desired file(s) to restore, either individually or click Select All to select all files.
4. Click Restore.
5. Click Quit.
6. Reboot the system to insure that you are using the newly restored settings.

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